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Onan

Parts Manual

RDJF

GenSet



974-0222
10-88 (SPEC A-AD)
Replaces
3-81 (Spec A-AC)
Printed in U.S.A.

Onan Service Parts

Index

TITLE	PAGE
INTRODUCTION	2
GENERATOR SET DATA TABLE	2,3
STANDARD PARTS SECTION	
Air Cleaner and Fuel Filters	12
Base, Oil	10
Block, Cylinder	4
Camshaft	25
Control	36-38
Cooling System	
Radiator (Key 1)	24
City Water (Key 2)	26
Crankshaft and Flywheel	6
Exciter, Generator - Spec A through Z	30-33
Exhaust System	28
Gearcase	11
Generator	
Spec A through Z	29
Begin Spec AA	34
Governor	16
Head, Cylinder	7
Injection System	14
Oil System	8
Piston and Rod	9
Pump Parts, Water (Key 2)	27
Regulator, Voltage - Begin Spec AA	39
Service Kits and Miscellaneous	40
Start Disconnect	17
Starter - Spec A through AC	20
Starter - Begin Spec AD	22
Starter Parts - Spec A through AC	21
Starter Parts - Begin Spec AD	23
Stop Solenoid - Spec A through AC	18
Stop Solenoid - Begin Spec AD	19
OPTIONAL PARTS SECTION	
Cleaner, Oil Bath Air	51
Control, Continuous Glow Plug (Begin Spec AB)	47
Exchanger, Heat (Key 2)	48
Filter, Voltage Regulator (Begin Spec AA)	46
Heater, Water Jacket	54
Housing and Chassis	42
Miscellaneous Optional Parts	57
Panel, AC Meter	44
Separator, Water	52
Separator Components, Water	53
Skid and Battery Rack (Key 2)	55
Switch, Dual High Water Temperature	
Radiator Cooled (Key 1)	56
City Water Cooled (Key 2)	56
Switch, Dual Low Oil Pressure	56
Switch, Low Coolant Level	50
Tank, Fuel (Housed Sets)	54

INTRODUCTION

This catalog applies to the standard RDJF Generator Sets as listed in the Generator Set Data Table. The model designation shown began during 1969. Previously, the model designations used a zero in place of the decimal in the kilowatt rating. (Example: 14.5 RDJF was formerly 14 RDJF and 17.5 RDJF was formerly 17 RDJF.) Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Unless otherwise mentioned in the description, parts are interchangeable between models. Parts illustrations are typical. Using the model and specification number from your generator set nameplate, select the Parts Key Number (1 or 2 in the last column) that applies to your set. This Parts Key Number represents parts that apply to radiator cooled or city water cooled models. Right and left sides are determined by facing the engine end (front) of the set.

GENERATOR SET DATA TABLE

MODEL AND SPECIFICATION NUMBER	COOLING SYSTEM	ELECTRICAL DATA					PARTS KEY NO.
		WATTS	VOLTS	HERTZ	WIRE	PHASE	
14.5RDJF-53R/*	Radiator	14500	120/240	50	3	1	1
14.5RDJF-53CR/*	Radiator	14500	120/240	50	**	1	
14.5RDJF-54R/*	Radiator	14500	120/208	50	4	3	
14.5RDJF-55DR/*	Radiator	14500	120/240	50	4	3	
14.5RDJF-57R/*	Radiator	14500	220/380	50	4	3	
14.5RDJF-57XR/*	Radiator	14500	240/416	50	4	3	
14.5RDJF-58R/*	Radiator	14500	127/220	50	4	3	
14.5RDJF-518R/*	Radiator	14500	★	50	12	3	
17.5RDJF-3R/*	Radiator	17500	120/240	60	3	1	1
17.5RDJF-3CR/*	Radiator	17500	120/240	60	**	1	
17.5RDJF-4R/*	Radiator	17500	120/208	60	4	3	
17.5RDJF-4XR/*	Radiator	17500	277/480	60	4	3	
17.5RDJF-5DR/*	Radiator	17500	120/240	60	4	3	
17.5RDJF-8R/*	Radiator	17500	127/220	60	4	3	
17.5RDJF-9XR/*	Radiator	17500	347/600	60	4	3	
17.5RDJF-18/*	Radiator	17500	★	60	12	3	
14.5RDJF-53R/*	City Water	14500	120/240	50	3	1	2
14.5RDJF-53CR/*	City Water	14500	120/240	50	**	1	
14.5RDJF-54R/*	City Water	14500	120/208	50	4	3	
14.5RDJF-55DR/*	City Water	14500	120/240	50	4	3	
14.5RDJF-57R/*	City Water	14500	220/380	50	4	3	
14.5RDJF-57XR/*	City Water	14500	240/416	50	4	3	
14.5RDJF-58R/*	City Water	14500	127/220	50	4	3	
14.5RDJF-518R/*	City Water	14500	★	50	12	3	
17.5RDJF-3R/*	City Water	17500	120/240	60	3	1	2
17.5RDJF-3CR/*	City Water	17500	120/240	60	**	1	
17.5RDJF-4R/*	City Water	17500	120/208	60	4	3	
17.5RDJF-4XR/*	City Water	17500	277/480	60	4	3	
17.5RDJF-5DR/*	City Water	17500	120/240	60	4	3	
17.5RDJF-8R/*	City Water	17500	127/220	60	4	3	
17.5RDJF-9XR/*	City Water	17500	347/600	60	4	3	
17.5RDJF-18R/*	City Water	17500	★	60	12	3	

(GENERATOR SET DATA TABLE CONTINUED)

GENERATOR SET DATA TABLE (CONTINUED)

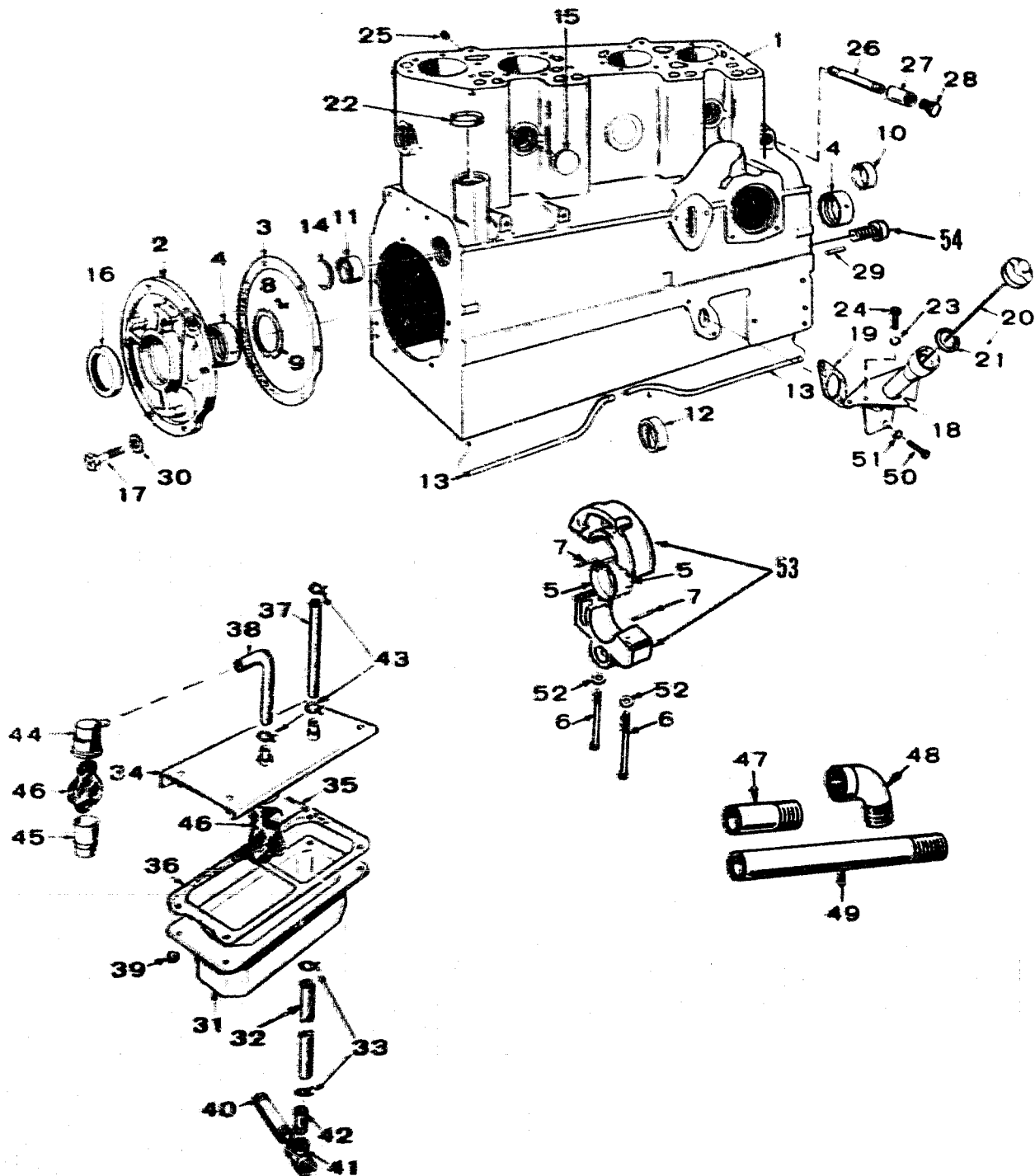
MODEL AND SPECIFICATION NUMBER	COOLING SYSTEM	ELECTRICAL DATA					PARTS KEY NO.
		WATTS	VOLTS	HERTZ	WIRE	PHASE	
Models listed below are Pennsylvania Approved Sets							
15.0RDJF-3R50/*	Radiator	15000	120/240	60	3	1	1
15.0RDJF-3CR50/*	Radiator	15000	120/240	60	**	1	
15.0RDJF-4R50/*	Radiator	15000	120/208	60	4	3	
15.0RDJF-4XR50/*	Radiator	15000	277/480	60	4	3	
15.0RDJF-18R50/*	Radiator	15000	★	60	12	3	
16.0RDJF-3R50/*	Radiator	16000	120/240	60	3	1	1
16.0RDJF-3CR50/*	Radiator	16000	120/240	60	**	1	
16.0RDJF-4R50/*	Radiator	16000	120/208	60	4	3	
16.0RDJF-4XR50/*	Radiator	16000	277/480	60	4	3	
16.0RDJF-18R50/*	Radiator	16000	★	60	12	3	
15.0RDJF-3R50/*	City Water	15000	120/240	60	3	1	2
15.0RDJF-3CR50/*	City Water	15000	120/240	60	**	1	
15.0RDJF-4R50/*	City Water	15000	120/208	60	4	3	
15.0RDJF-4XR50/*	City Water	15000	277/480	60	4	3	
15.0RDJF-18R50/*	City Water	15000	★	60	12	3	
16.0RDJF-3R50/*	City Water	16000	120/240	60	3	1	2
16.0RDJF-3CR50/*	City Water	16000	120/240	60	**	1	
16.0RDJF-4R50/*	City Water	16000	120/208	60	4	3	
16.0RDJF-4XR50/*	City Water	16000	277/480	60	4	3	
16.0RDJF-18R50/*	City Water	16000	★	60	12	3	

- * - The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter(s). The specification number denotes customer requested options or deviations from a standard (1A, 1B, ... 1AA, 1AB, etc.) model. The specification letter advances (A to B, B to C ... Z to AA, AA to AB, etc.) with major manufacturing changes.
- ** - These generators have four load wires which are reconnectable for 120 volt, 2 wire service or 240 volt, 2 wire service or 120/240 volt, 3 wire service.
- ★ - Broad range reconnectable sets, refer to connection diagram inside outlet box cover.

STANDARD PARTS SECTION

This section contains parts applicable to models listed in the generator set data table.

CYLINDER BLOCK

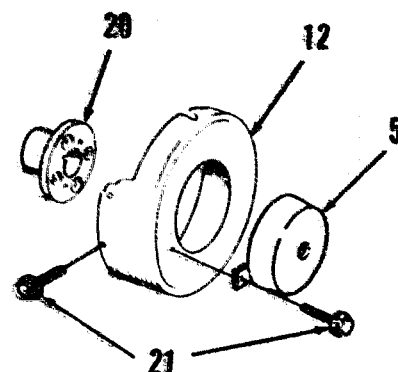
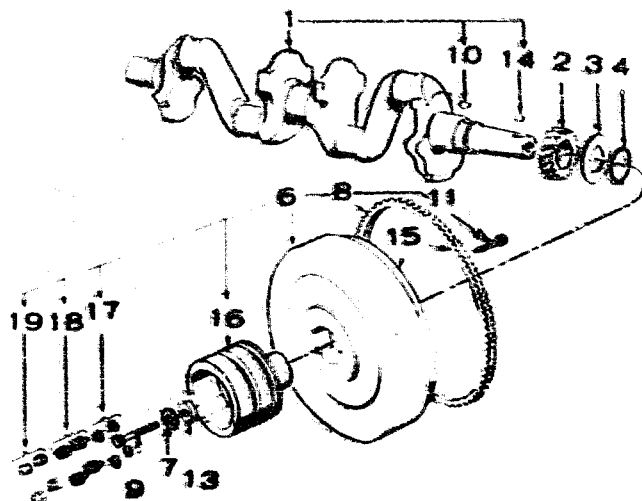


CYLINDER BLOCK

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BLOCK ASSEMBLY, CYLINDER (Includes Tappets)			27	505-0027	1	Coupling, Pipe (1/4") Water Drain
	110-2449	1	Key 1 (Includes Parts Marked *)	28	502-0153	1	Plug, Pipe (Brass) 1/4" Hex Head - Water Drain
	110-2450	1	Key 2 (Includes Parts Marked #)	29	516-0141	2	*#Pin, Gearcase Locating
2	101-0337	1	*#Plate, Rear Bearing	30	526-0245	6	*#Washer, Bearing Plate (Special)
3	101-0386	1	*#Gasket and Shim Kit, Rear Bearing Plate - Includes Bearing Plate Mounting Washers	31	123-1061	1	Damper, Breather Pulsation - Spec A and B
4	BEARING, MAIN - FRONT AND REAR			32	503-0564	1	Hose, Overflow - Spec A and B
	101-0359	2	*#Standard	33	503-0197	2	Clamp, Overflow Hose - Spec A and B
	101-0359-02	2	.002" Undersize	34	123-1045	1	Cover, Breather Pulsation Damper - Spec A and B
	101-0359-10	2	.010" Undersize	35	516-0177	1	Pin, Cotter - Spec A and B
	101-0359-20	2	.020" Undersize	36	123-1049	1	Gasket, Cover - Spec A and B
	101-0359-30	2	.030" Undersize	37	503-0563	1	Hose, Cover to Manifold - Spec A and B
5	BEARING HALF, MAIN - CENTER			38	503-0562	1	Hose, Cover to Breather Cap - Spec A and B
	101-0361	2	*#Standard	39	870-0240	4	Nut, Self-Locking (Washer Base) #10-32 - Spec A and B
	101-0361-02	2	.002" Undersize	40	505-0690	1	Nipple, Pipe (1/2" x Close) Spec A and B
	101-0361-10	2	.010" Undersize	41	505-0682	1	Tee, Pipe (1/2") Spec A and B
	101-0361-20	2	.020" Undersize	42	505-0674	1	Nipple, Half - Pipe (1/2" x 2-1/2") Spec A and B
	101-0361-30	2	.030" Undersize	43	503-0170	4	Clamp, Hose - Spec A and B
6	101-0342	2	*#Bolt, Center Bearing Housing	44	123-0787	1	Cap, Breather Tube - Spec A and B
7	516-0149	2	Pin, Center Bearing Housing	45	123-0645	1	*#Tube, Breather - Spec A and B
8	516-0072	4	Pin, Thrust Washer	46	123-0865	2	Filter, Breather Tube - Spec A and B
9	104-0420	2	*#Washer, Crankshaft Thrust	47	505-0135	1	Nipple, Half - Pipe (3/8" x 1-1/2") Key 1 Sets With Water Jacket Heater
10	101-0363	1	*#Bearing, Camshaft - Front	48	505-0039	1	Elbow, Pipe (3/8"-90°) Key 1 Sets With Water Jacket Heater
11	101-0365	1	*#Bearing, Camshaft - Rear	49	505-0273	1	Nipple, Half - Pipe (3/8" x 4") Key 1 Sets With Water Jacket Heater
12	101-0364	1	*#Bearing, Camshaft - Center	50	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")
13	*#TUBE, CRANKCASE OIL			51	850-0045	2	Washer, Lock - Spring (5/16")
	120-0586	1	Front	52	526-0035	2	*#Washer, Flat (17/32" ID x 7/8" OD x 1/8" Thk)
	120-0585	1	Rear	53	101-0356	1	*#Housing, Bearing - Center Main (Includes Pins)
14	517-0053	1	*#Plug, Expansion - Rear Camshaft Opening	54	SCREW, SET - SOCKET HEAD (3/8-16 x 5/16") City Water Cooled Sets Begin Spec AD		
15	PLUG, EXPANSION - CYLINDER BLOCK			803-0067	4	#Sets Without Heat Exchanger	
			1-7/16"	803-0067	1	Sets With Heat Exchanger	
	517-0059	3	* Key 1				
	517-0059	4	# Key 2				
	517-0096	2	*#1-9/16"				
	517-0097	1	*#1-3/4"				
16	509-0086	1	Seal, Crankshaft - Rear				
17	805-0019	6	*#Bolt, Rear Bearing Plate (Special)				
18	123-1086	1	Tube, Oil Fill				
19	123-0667	1	Gasket, Oil Fill				
20	123-1056	1	Cap and Indicator				
21	123-0191	1	Gasket, Cap				
22	517-0103	1	*#Plug, Core Hole - Begin Spec C				
23	850-0045	3	Washer, Lock - Spring (5/16")				
24	800-0026	3	Screw, Cap - Hex Head (5/16-18 x 3/4")				
25	505-0266	2	*#Plug, Pipe (3/8" - Square Countersunk) Key 1 Sets Without Water Jacket Heater				
26	505-0449	1	Nipple, Pipe (1/4" x 6") Water Drain				

* - Parts Included in 110-2449 Cylinder Block Assembly.
- Parts Included in 110-2450 Cylinder Block Assembly.

CRANKSHAFT AND FLYWHEEL



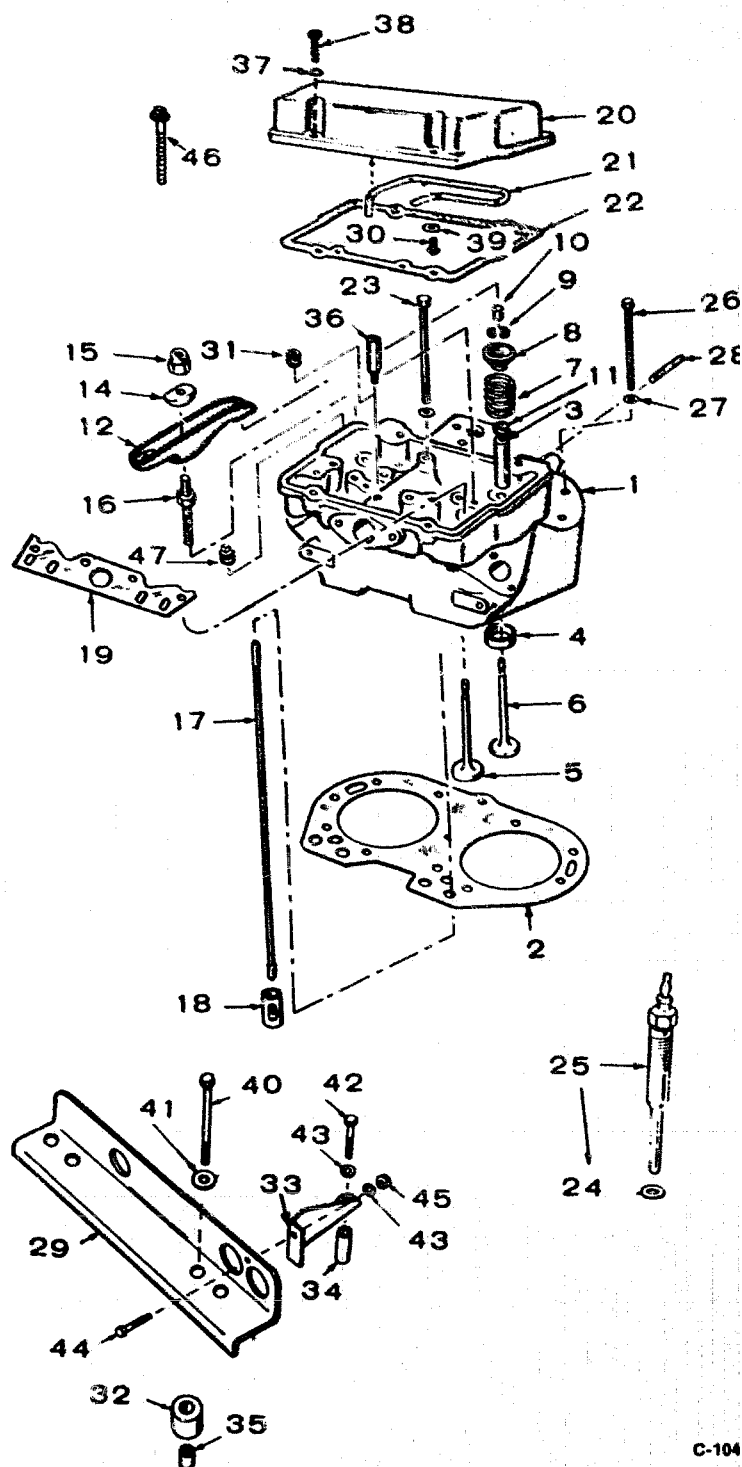
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-1361	1	Crankshaft (Includes Keys)
2	104-0418	1	Gear, Crankshaft
3	104-0416	1	Washer, Gear Retainer
4	518-0188	1	Ring, Lock
5	104-0594	1	Cover, Flywheel Guard - Key 2 Sets Without Heat Exchanger
6	FLYWHEEL ASSEMBLY		
			Key 1
	104-0549	1	Spec A through AB (Includes Parts Marked *)
	104-1129	1	Begin Spec AC (Includes Parts Marked +)
			Key 2
	104-0556	1	Sets Without Heat Exchanger (Includes Parts Marked #)
	104-0549	1	Sets With Heat Exchanger (Includes Parts Marked *)
7	850-0055	1	Washer, Lock (7/16") - Flywheel Mounting
8	104-0423	1	Gear, Ring
9	800-0500	1	Screw, Flywheel Mounting (Special)
10	515-0001	1	Key, Crankshaft Gear
11	801-0054	4	+ #*Screw, Flywheel Hub Mounting (3/8-24 x 2")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
12	104-0510	1	Guard, Flywheel - Key 2
13	526-0185	1	Washer, Flywheel Mounting
14	515-0153	1	Key, Flywheel to Crankshaft
15	104-0547	1	+ #*Flywheel (Includes Ring Gear)
16	HUB & PULLEY, FLYWHEEL		
			Key 1
	104-0957	1	* Spec A through AB
	104-1121	1	+ Begin Spec AC
	104-0957	1	*Key 2 Sets With Heat Exchanger
17	526-0187	1	+ #*Washer, Flat - Hub to Flywheel (Special)
18	104-0543	4	+ #*Spacer & Washer Assembly - Hub to Flywheel
19	NUT, LOCKING - Hub to Flywheel (Special)		
	870-0352	4	*Key 1, Key 2 Sets With Heat Exchanger
	115-0150	4	#Key 2 Sets Without Heat Exchanger
20	134-1401	1	#Hub, Flywheel - Key 2 Sets Without Heat Exchanger
21	SCREW, LOCKING HEAD FLANGE (1/4-20 x 1/2")		
	821-0010	3	Cover Mounting
	821-0010	5	Guard Mounting

- * - Parts Included in 104-0549 Flywheel Assembly.
- # - Parts Included in 104-0556 Flywheel Assembly.
- + - Parts Included in 104-1129 Flywheel Assembly.

CYLINDER HEAD

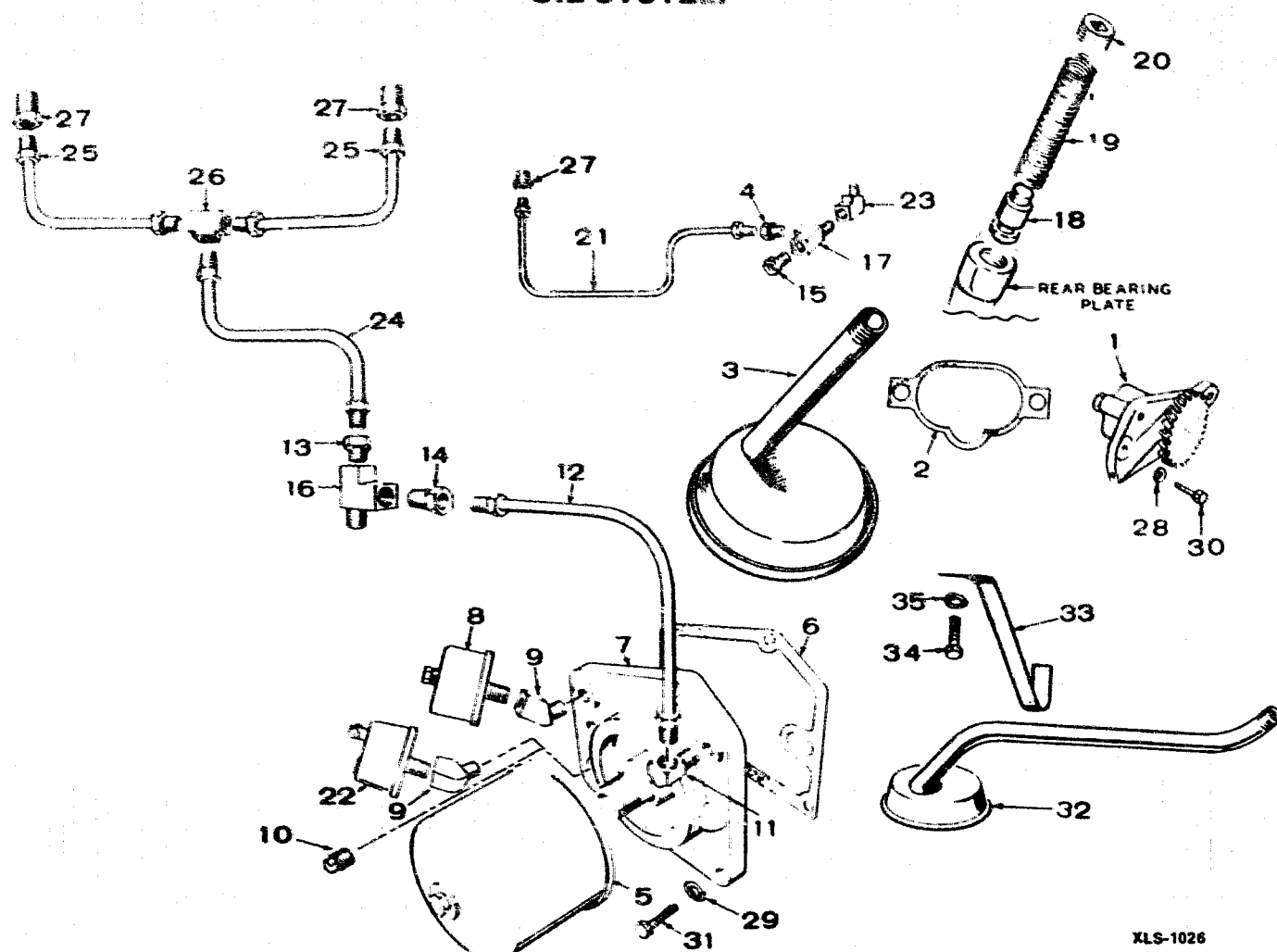
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	HEAD, CYLINDER		
	110-2986	2	With Valves (Includes Cylinder Head Connector and Parts Marked *)
	110-2984	2	*Without Valves (Includes Parts Marked #)
2	110-2464	2	Gasket, Head
3	110-1501	8	#Guide, Valve
4	INSERT, VALVE SEAT		
	110-1268	8	#Standard
	110-1268-02	8	.002" Oversize
	110-1268-05	8	.005" Oversize
	110-1268-10	8	.010" Oversize
	110-1268-25	8	.025" Oversize
5	110-1871	4	*Valve, Intake
6	110-1278	4	*Valve, Exhaust
7	110-1221	8	*Spring, Valve
8	110-1220	8	*Retainer, Valve Spring
9	110-0858	16	*Lock, Valve Spring Retainer
10	110-0859	8	Cap, Valve Stem
11	509-0132	4	*Seal, Oil - Intake Valve
12	ARM, ROCKER		
	115-0128	4	Exhaust
	115-0129	4	Intake
14	115-0127	8	Ball, Rocker Arm
15	115-0150	8	Locknut, Rocker Arm
16	115-0152	8	*Stud, Rocker Arm
17	115-0149	8	Rod, Valve Push
18	115-0195	8	†Tappet, Valve
19	115-0196	2	#Guide, Push Rod
20	115-0134	2	Cover Assembly, Rocker (Includes Parts Marked Δ)
21	120-0628	2	ΔLine, Oil - Rocker Cover
22	115-0130	2	Gasket, Rocker Cover
23	110-1264	10	Screw, Cylinder Head Mounting (Special)
24	110-0546	4	Gasket, Glow Plug
25	333-0106	4	Plug, Glow - Includes Gasket
26	800-0501	14	Screw, Cylinder Head Mounting (Special)
27	526-0174	14	Washer, Flat (13/32" ID x 25/32" OD x 0.1345" Thk)
28	520-0608	8	*Stud, Exhaust Manifold
29	403-0690	1	Bracket, Lifting
30	815-0562	2	ΔScrew, Machine - Cross Recessed Pan Head (#10 x 5/16")
31	505-0274	2	#Plug, Pipe - Countersunk Hex Head (1/8") (Sets Without Standpipe)
32	402-0361	2	Cushion, Vibration
33	403-0890	1	Brace, Lifting Bracket
34	403-0826	1	Spacer, Lifting Bracket
35	402-0362	2	Bushing, Spacer
36	123-1140	2	#Standpipe - Begin Spec C
37	850-0045	8	Washer, Lock - Spring (5/16")
38	800-0030	8	Screw, Cap - Hex Head (5/16-18 x 1-1/4")
39	526-0130	1	ΔWasher, Flat (17/64" ID x 1" OD x 1/16" Thk)
40	800-0094	2	Screw, Cap - Hex Head (1/2-13 x 2")
41	526-0100	2	Washer, Flat - Unplated (9/16" ID x 1-3/8" OD x 7/64" Thk)
42	800-0038	1	Screw, Cap - Hex Head (5/16-18 x 3-1/4")
43	850-0045	2	Washer, Lock - Spring (5/16")
44	800-0025	1	Screw, Cap - Hex Head (5/16-18 x 3/8")
45	862-0015	1	Nut, Hex (5/16-18)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
46	110-1282	1	Bolt, Cylinder Head (Special) (Switch Mounting) Sets With Low Engine Temperature Switch
47	505-0110	2	#Plug, Pipe - Square Head (3/8") - Key 1

* - Parts Included in 110-2986 Cylinder Head.
 # - Parts Included in 110-2984 Cylinder Head.
 † - Included in Cylinder Block Assemblies.
 Δ - Parts Included in 115-0134 Rocker Cover Assembly.

OIL SYSTEM



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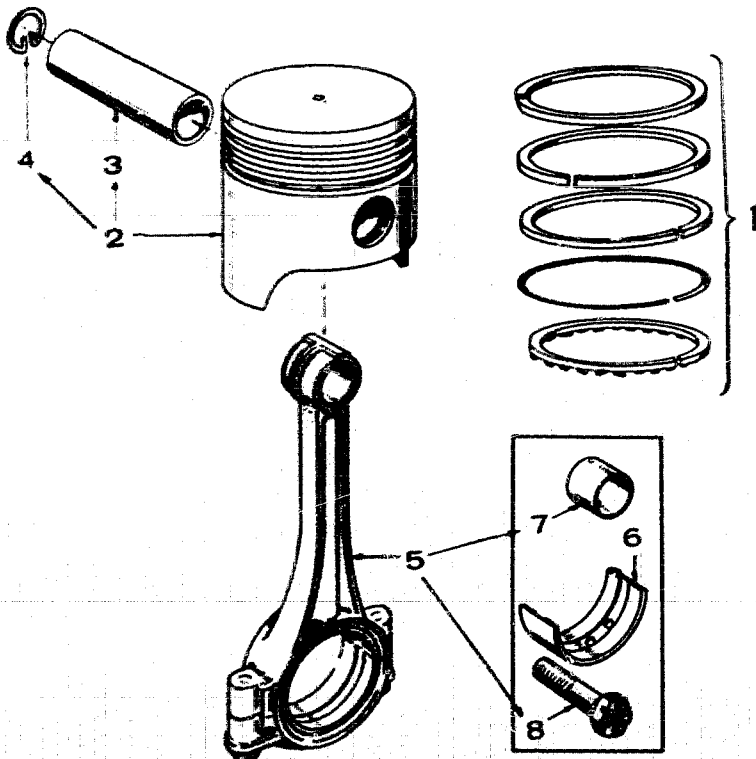
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	120-0547	1	Pump, Oil	15	502-0097	1	Connector, Inverted Male - Cylinder Head Line to Front Cylinder Head Tee - Spec A and B
2	120-0580	1	Gasket Kit, Oil Pump	16	502-0242	1	Tee, Restricted
3		1	Cup, Oil Pump Intake (Used On Early Models) Sets With Straight Tube Order Oil Pump Intake Cup Kit 120-0756 (Includes Parts Marked *)	17	502-0282	1	Tee, Front Cylinder Head - Spec A and B
4	502-0097	1	Connector, Inverted Male - Front Cylinder Head Tee to Rear Cylinder Head Line - Spec A and B	18	120-0539	1	Valve, Oil By-Pass
5	122-0185	1	Filter, Oil (4-3/8" Long)	19	120-0555	1	Spring, By-Pass Valve
6	122-0188	1	Gasket, Adapter	20	505-0274	1	Plug, Pipe (1/8") Countersunk - Oil By-Pass
7	122-0182	1	Adapter, Oil Filter	21	120-0635	1	Line, Front Cylinder Head Tee to Rear Cylinder Head Connector - Spec A and B
8	SENDER, OIL PRESSURE			22	309-0169	1	Switch, Low Oil Pressure - Not Used on Pennsylvania Approved Sets
	193-0108	1	Spec A through AA	23	502-0053	1	Elbow, Street - 45° Brass - Front Cylinder Head - Spec A and B
	193-0244	1	Spec AB	24	LINE, INJECTION PUMP TEE TO CYLINDER HEAD TEE		
	193-0271	1	Begin Spec AC		120-0630	1	Spec A and B
9	502-0853	2	Elbow, Street - 45° Brass (One Used on Pennsylvania Approved Sets)		120-0697	1	Begin Spec C
10	505-0057	1	Plug, Pipe (1/8") Pennsylvania Approved Sets	25	120-0695	2	Line, Oil - Cylinder Head - Begin Spec C
11	502-0037	1	Elbow, Oil Line to Adapter	26	502-0373	1	Tee, Inverted Flare - Begin Spec C
12	120-0636	1	Line, Adapter to Injection Pump Tee	27	CONNECTOR, INVERTED MALE - Cylinder Head		
13	502-0097	1	Connector, Inverted Male - Injection Pump Tee to Cylinder Head Line		502-0281	1	Spec A and B (Rear Cylinder Head)
14	502-0274	1	Connector, Inverted Male - Adapter Line to Injection Pump Tee		502-0281	2	Begin Spec C

OIL SYSTEM

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	WASHER, LOCK - SPRING (5/16")		
28	850-0045	2	Oil Pump Mounting
29	850-0045	3	Oil Filter Adapter Mounting
	SCREW, CAP - HEX HEAD		
30	800-0030	2	Oil Pump Mounting (5/16-18 x 1-1/4")
31	800-0028	3	Oil Filter Adapter Mounting (5/16-18 x 1")
32	120-0601	1	*Cup, Oil Pump Intake
33	120-0602	1	*Bracket, Oil Pump Intake Cup
34	800-0025	1	*Screw, Cap - Hex Head (5/16-18 x 5/8")
35	850-0045	1	*Washer, Lock - Spring (5/16")

* - Parts Included in 120-0756 Oil Pump Intake Cup Kit.

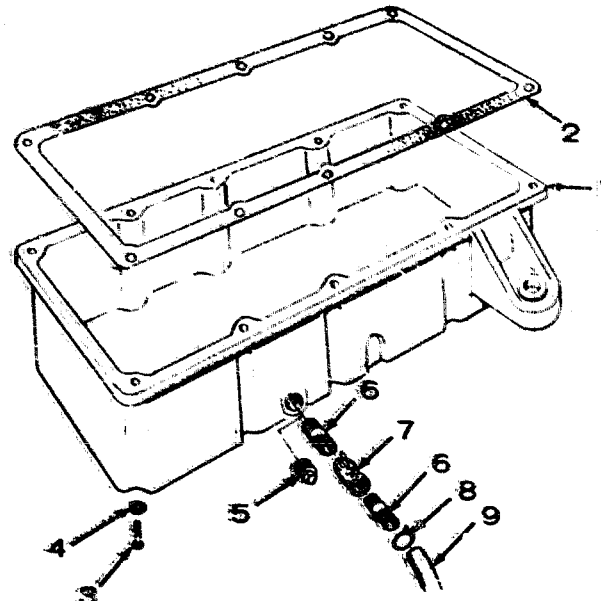
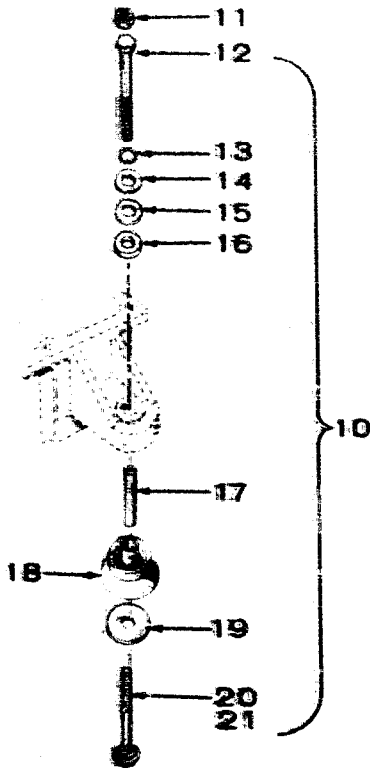
PISTON AND ROD



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	RING SET, PISTON		
	113-0137	4	Standard
	113-0137-05	4	.005" Oversize
	113-0137-10	4	.010" Oversize
	113-0137-20	4	.020" Oversize
	113-0137-30	4	.030" Oversize
	113-0137-40	4	.040" Oversize
2	PISTON AND PIN (Includes Pin Retaining Rings)		
	112-0176	4	Standard
	112-0176-05	4	.005" Oversize
	112-0176-10	4	.010" Oversize
	112-0176-20	4	.020" Oversize
	112-0176-30	4	.030" Oversize
	112-0176-40	4	.040" Oversize
3	112-0117	4	Pin, Piston
4	112-0085	8	Ring, Retaining
5	114-0168	4	Rod Assembly, Connecting
6	BEARING HALF, CONNECTING ROD		
	114-0164	8	Standard
	114-0164-02	8	.002" Undersize
	114-0164-10	8	.010" Undersize
	114-0164-20	8	.020" Undersize
	114-0164-30	8	.030" Undersize
7	114-0170	8	Bushing, Piston Pin Connecting Rod
8	805-0012	8	Bolt, Place (Special)

CT-1017

OIL BASE



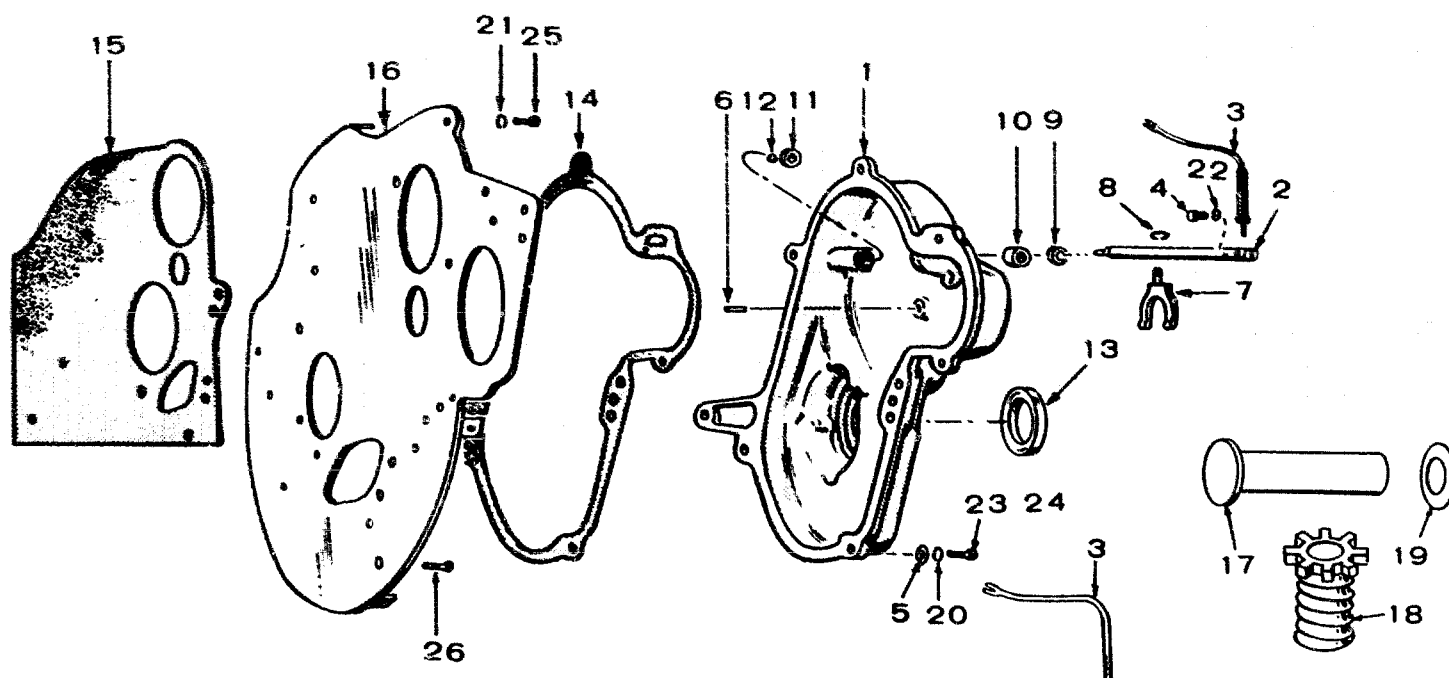
LS-1037

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BASE, OIL 102-0539 102-0549	1 1	Sets Without Oil Base Heater Sets With Oil Base Heater
2	102-0475	1	Gasket, Oil Base
3	800-0072	10	Screw, Cap - Hex Head (7/16-14 x 1-1/4")
4	850-0055	10	Washer, Lock - Spring (7/16")
5	505-0056	1	Plug, Pipe - Square Head (1/2") Key 2 Sets Without Skid Base
6	NIPPLE, PIPE 505-0100 505-0002	2 2	Close (1/2") Key 1 Long (1/2" x 3") Key 2 Sets With Skid Base
7	504-0011	1	Valve, Oil Drain - Key 1, Key 2 Sets With Skid Base
8	503-0197	1	Clamp, Hose - Key 1, Key 2 Sets With Skid Base
9	503-0316	1	Hose, Oil Drain - Key 1, Key 2 Sets With Skid Base
10	HARDWARE PACKAGE, MOUNTING 402-0356 402-0291 402-0327	4 4 1	Key 1 (Includes Parts Marked *) Key 2 Sets Without Skid Base (Includes Parts Marked #) Sets With Skid Base (Includes Parts Marked ‡)
11	862-0004	4	#‡Nut, Hex (7/16") Key 2
12	800-0081	4	*Screw, Cap - Hex Head (7/16-14 x 3-1/2") Key 1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
13	850-0055	4	*‡Washer, Lock - Spring (7/16")
14	526-0014	4	*‡Washer, Flat (29/64" ID x 1-1/2" OD x 1/8" Thk)
15	526-0198	8	*‡Washer, Flat (5/8" ID x 1-1/2" OD x 1/16" Thk) (Use as Required)
16	402-0282	4	*‡Snubber - Shock Mounting
17	402-0290	4	*‡Bushing, Spacer
18	CUSHION, VIBRATION 402-0285 402-0287 402-0286	2 2 2	Engine End Generator End Spec A Through Z Begin Spec AA
19	WASHER, FLAT (29/64" ID x 3-1/4" OD x 1/8" Thk) Key 2 526-0195 526-0195 526-0199	4 3 1	#Sets Without Skid Base ‡Sets With Skid Base ‡Sets With Skid Base (Notched)
20	816-0212	4	#Bolt, Carriage (7/16-14 x 5-1/2") Key 2 Sets Without Skid Base
21	800-0082	4	‡Screw, Cap - Hex Head (7/16-14 x 3-3/4") Key 2 Sets With Skid Base

- * - Parts Included in 402-0356 Mounting Hardware Package
- # - Parts Included in 402-0291 Mounting Hardware Package
- ‡ - Parts Included in 402-0327 Mounting Hardware Package

GEARCASE



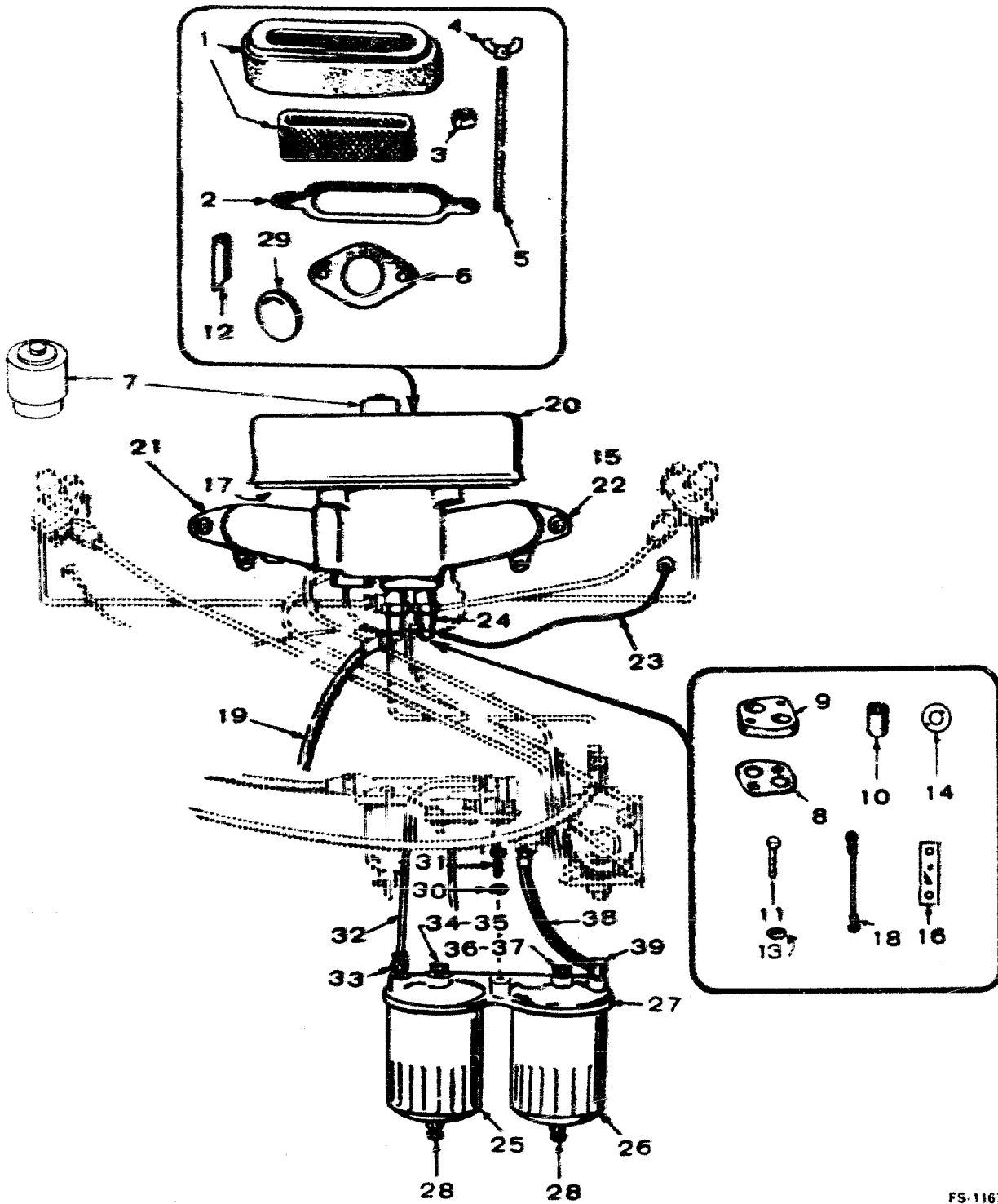
CT-1018

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	GEARCASE ASSEMBLY (Includes Parts Marked *)		
	103-0307	1	Key 1
	103-0277	1	Key 2
2	SHAFT, GOVERNOR		
	150-0901	1	Key 1
	150-0838	1	Key 2
3	ARM, GOVERNOR		
	150-1228	1	Key 1
	150-1095	1	Key 2
4	SCREW, MACHINE - HEX HEAD (#8-32 x 1/2")		
	815-0176	2	Key 1
	815-0176	1	Key 2
5	526-0115	5	Washer, Flat - Gearcase Mounting (11/32" ID x 11/16" OD x 1/16" Thk)
6	516-0111	1	*Pin, Governor Cup Stop
7	150-0777	1	*Yoke, Governor
8	518-0129	1	*Ring, Yoke Retaining
9	509-0088	1	*Seal, Governor Shaft
10	510-0048	1	*Bearing, Shaft - 1/2"
11	510-0082	1	*Bearing, Shaft - 1/4"
12	510-0043	1	*Ball, Governor Shaft Thrust
13	509-0087	1	*Seal
14	103-0251	1	Gasket, Gearcase
15	103-0218	1	Gasket, Backplate

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
16	103-0521	1	Backplate, Gearcase
17	150-1154	1	*Pin, Governor Shaft Hub - Key 1
18	150-1160	1	*Hub, Governor Shaft - Key 1
19	150-1155	1	*Washer, Spring - Governor Shaft - Key 1
	WASHER, LOCK - SPRING (5/16")		
20	850-0045	5	Gearcase Mounting
21	850-0045	1	Backplate Mounting
22	WASHER, LOCK - SPRING (#8)		
	850-0025	2	Key 1
	850-0025	1	Key 2
	SCREW, CAP - HEX HEAD		
23	800-0028	1	Gearcase Mounting (5/16-18 x 1")
24	110-0879	4	Gearcase Mounting (Special)
25	800-0026	1	Backplate Mounting (5/16-18 x 3/4")
26	815-0347	2	Screw, Machine - Flat Head - Socket Drive (1/4-20 x 1/2") Backplate Mounting

* - Parts Included in Gearcase Assemblies.

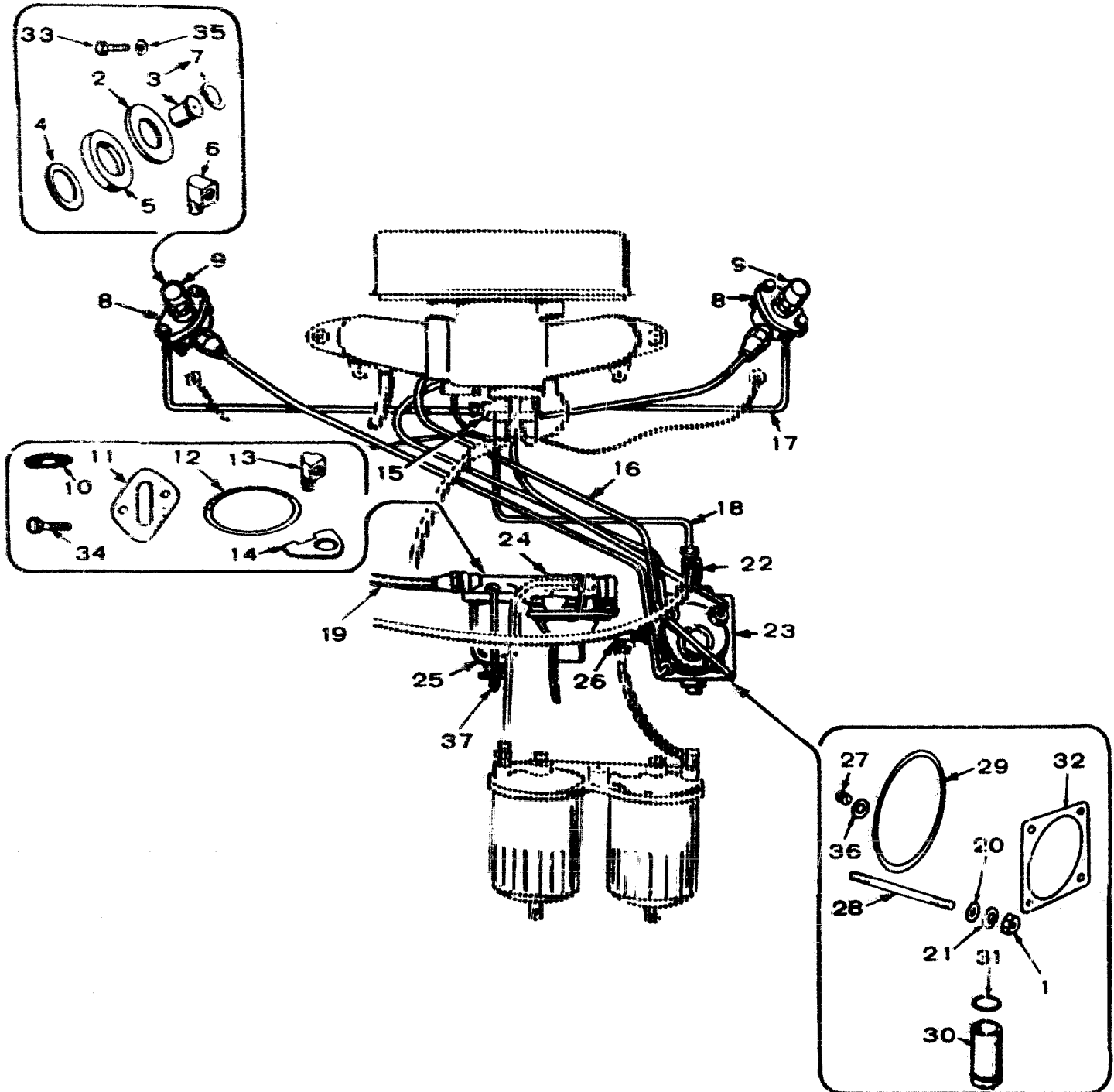
AIR CLEANER AND FUEL FILTERS



AIR CLEANER AND FUEL FILTERS

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-0636	1	Element and Retainer, Air Cleaner	23	LEAD, GLOW PLUG TO AIR HEATER		
2	140-0584	1	Gasket, Air Cleaner		336-1504	2	No. 1 and 4 Cylinders (12-1/4")
3	505-0054	1	Plug, Pipe (1/4") Intake Manifold (Used on Early Models)		336-1505	2	No. 2 and 3 Cylinders (5-1/4")
4	865-0020	2	Nut, Wing - Air Cleaner	24	154-0712	2	Heater, Manifold - Includes Gasket
5	520-0621	2	Stud, Air Cleaner	25	122-0325	1	Filter, Fuel - Primary
6	154-0733	2	Gasket, Intake Manifold	26	122-0326	1	Filter, Fuel - Secondary
7	140-0961	1	Indicator, Restriction - Late Models	27	149-1185	1	Adapter, Fuel Filters
8	140-0706	1	Gasket, Manifold Heater Insulator	28	502-0080	2	Plug, Drain - Fuel Filters
9	140-0705	1	Plate, Manifold Heater Mounting	29	517-0104	1	Plug, Core Hole - Intake Manifold
10	508-0103	2	Sleeve, Insulator Manifold Heater Mounting	30	850-0045	3	Washer, Lock - Spring (5/16") Fuel Filter Adapter Mounting
11	114-0023	2	Screw, Cap - Hex Head (Special) Manifold Heater Mounting	31	800-0026	3	Screw, Cap - Hex Head (5/16-18 x 3/4") Fuel Filter Adapter Mounting
12	123-0732	1	Tube, Nylon - Breather Hose to Manifold (Spec A and B)	32	149-1189	1	Line, Fuel Pump to Primary Filter
13	850-0040	2	Washer, Lock - Spring (1/4") Manifold Heater Mounting	33	502-0003	1	Connector, Primary Fuel Filter Inlet
14	508-0102	2	Washer, Insulator - Manifold Heater Mounting	34	526-0068	1	Washer, Flat (29/64" ID x 3/4" OD x 1/16" Thk) Primary Fuel Filter Mounting
15	STUD, INTAKE MANIFOLD			35	801-0074	1	Screw, Cap - Hex Head (7/16-20 x 1-3/4") Primary Fuel Filter Mounting
	520-0011	2	5/16" x 1-7/16"	36	526-0066	1	Washer, Flat (25/64" ID x 9/16" OD x 1-16" Thk) Secondary Fuel Filter Mounting
	520-0338	2	5/16" x 2-7/8"				
16	332-0629	1	Strap, Jumper - Heater	37	801-0053	1	Screw, Cap - Hex Head (3/8-24 x 1-3/4") Secondary Fuel Filter Mounting
17	140-0595	1	Pan, Ai. Cleaner	38	501-0129	1	Line, Fuel - Secondary Filter to Injection Pump
18	334-0031	1	Lead, Jumper - Heater	39	502-0099	1	Elbow, Reducer - Secondary Fuel Filter Outlet
19	336-1229	1	Lead - Heater to Solenoid in Control				
20	COVER, AIR CLEANER						
	140-0594	1	Sets Without Restriction Indicator				
	140-1194	1	Sets With Restriction Indicator				
21	154-1378	1	Manifold, Intake				
22	870-0137	2	Nut, Hex (5/16-24) Intake Manifold Mounting				

INJECTION SYSTEM



INJECTION SYSTEM

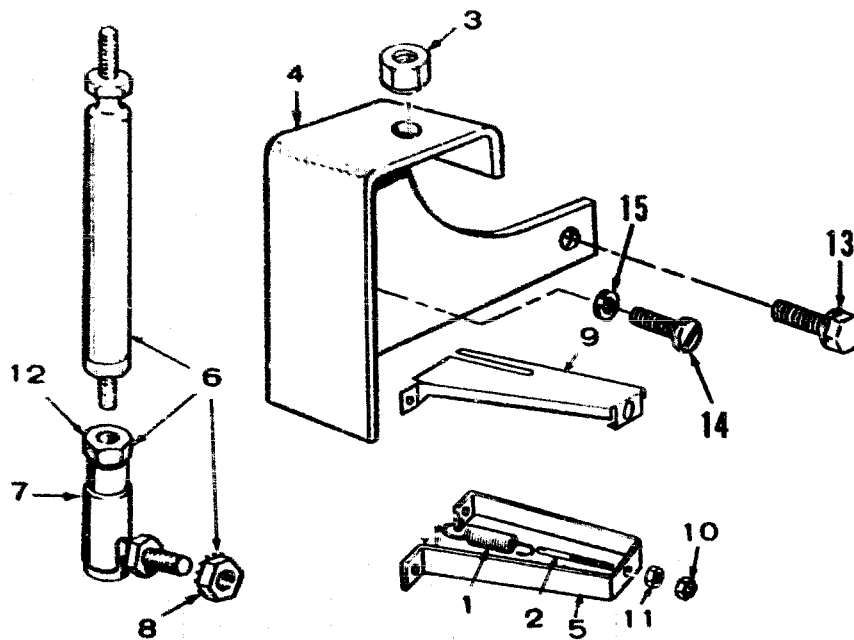
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	862-0015	4	Nut, Hex (5/16-18) Injection Pump Mounting
2	147-0043	4	Gasket, Nozzle Heat Shield (Asbestos)
3	147-0134	4	Nozzle - Includes Nozzle Gasket
4	110-0419	4	Gasket - Shield to Head (Copper)
5	147-0044	8	Shield, Nozzle Heat (Steel)
6	ELBOW, NOZZLE (Fuel Return Line)		
	502-0065	2	Inverted (45°)
	502-0002	2	Inverted (90°)
7	147-0243	4	Gasket, Nozzle
8	147-0141	4	Flange, Injection Nozzle Hold Down
9	147-0136	4	Nozzle and Holder Assembly
10	149-0463	1	#Screen, Fuel Pump
11	149-0792	1	#Gasket, Fuel Pump Mounting
12	149-0517	1	#Gasket, Fuel Pump Bowl
13	502-0002	2	Elbow, Inverted (90°) Fuel Pump Inlet and Outlet
14	149-1307	2	#Stiffener, Fuel Pump Mounting
15	502-0245	1	Tee - Return Lines
16	LINE, INJECTION (Pump to Nozzle) Includes Fitting		
	149-1150	1	No. 1 Cylinder
	149-1151	1	No. 2 Cylinder
	149-1152	1	No. 3 Cylinder
	149-1153	1	No. 4 Cylinder
17	LINE, NOZZLE FUEL RETURN		
	149-1060	1	No. 1 Cylinder
	149-1059	2	No. 2 and 3 Cylinders
	149-1061	1	No. 4 Cylinder
18	149-1062	1	Line, Fuel Return Tee to Injection Pump
19	501-0007	2	Line, Fuel - Fuel Pump Inlet and Fuel Return
20	526-0022	4	Washer, Flat (21/64" ID x 9/16" OD x 1/16" Thk) Injection Pump Mounting
21	850-0045	4	Washer, Lock - Spring (5/16") Injection Pump Mounting
22	147-0183	1	*Valve, Bleeder
23	147-0232	1	Pump Kit, Injection (Includes Governor Ball Joint, Nut and Parts Marked *)
24	149-1704	1	Pump Kit, Fuel (Includes Parts Marked #)
	149-1046	1	Repair Kit, Fuel Pump (Includes Diaphragm and Gaskets)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
25	BOWL, FUEL PUMP (Measure for Correct Length)		
	149-0116	1	2-3/8" Lg
	149-1168	1	#1-5/8" Lg
26	502-0039	1	Elbow, Inverted Male (90°) Injection Pump Inlet
27	BUTTON, INJECTION PUMP PLUNGER		
	147-0147	1	*.119 - Marked 1 or A
	147-0148	1	*.116 - Marked 2 or B
	147-0149	1	.113 - Marked 3 or C
	147-0150	1	.110 - Marked 4 or D
	147-0151	1	.107 - Marked 5 or E
	147-0161	1	.104 - Standard Marked 11 or No Mark
	147-0152	1	.101 - Marked 6 or F
	147-0153	1	.098 - Marked 7 or H
	147-0154	1	.095 - Marked 8 or J
	147-0155	1	.092 - Marked 9 or K
	147-0156	1	.089 - Marked 10 or L
	147-0190	1	*.122 - Marked 12 or M
	147-0189	1	*.125 - Marked 13 or N
	147-0188	1	.128 - Marked 14 or P
	147-0187	1	.131 - Marked 15 or R
	147-0186	1	.134 - Marked 16 or S
28	520-0129	4	Stud, Injection Pump Mounting
29	509-0094	1	*Seal, O-Ring - Injection Pump to Crankcase
30	147-0182	1	*Tappet, Injection Pump
31	147-0196	1	*Gasket, O-Ring - Injection Pump Tappet
32	147-0145	1	Shim Kit, Injection Pump Mounting
33	114-0171	8	Screw, Cap - Hex Head (5/16-18 x 2") Nozzle and Holder Mounting
34	802-0054	2	#Screw, Cap - Socket Head (5/16-18 x 7/8") Fuel Pump Mounting
35	526-0122	8	Washer, Flat (11/32" ID x 23/32" OD x 10 Gauge Thk) Nozzle and Holder Mounting
36	147-0259	1	*Ring, Retaining - Timing Buttol
37	BAIL, FUEL PUMP BOWL (Measure for Correct Length)		
	149-1006	1	3-5/8" Lg
	149-1169	1	#2-7/8" Lg

* - Parts Included in 147-0232 Injection Pump Kit.

- Parts Included in 149-1704 Fuel Pump Kit.

GOVERNOR

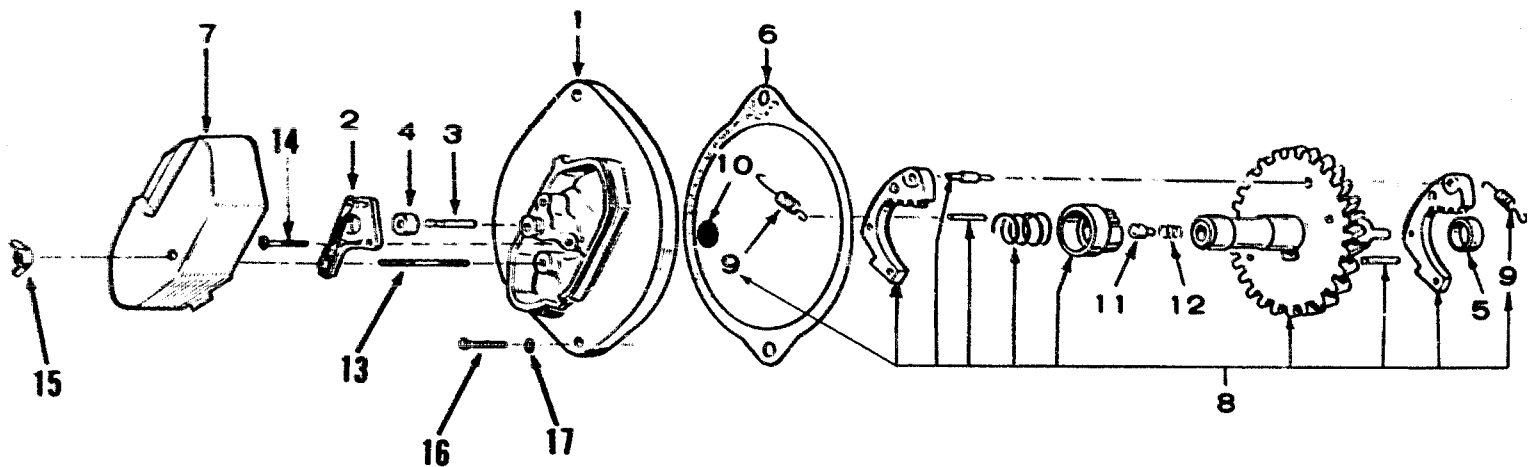


FS-116E

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-1084	1	Spring, Governor
2	150-1082	1	Stud, Governor Adjusting
3	862-0011	1	Nut, Hex (Special) Key 1
4	150-1105	1	Bracket, Governor - Key 1
5	150-1103	1	Bracket, Governor, Key 2
6	150-1132	1	Linkage Assembly, Governor - Includes Parts Marked *
7	JOINT, BALL		
	150-1358	1	*Governor Linkage
	150-0939	1	Injection Pump (Included With Injection Pump)
8	870-0131	2	*Nut, Hex - With ET (#10-32) (1 Nut Included With Injection Pump)
9	150-0823	1	Cover, Governor Spring Control - Key 2
10	870-0133	1	Palnut, Locking (3/8-16) Key 2
11	862-0003	1	Nut, Hex (3/8-16) Key 2
12	871-0010	2	*Nut, Hex (#10-32) Brass
13	821-0018	1	Screw, Hex Locking Head (Flange) (1/4-20 x 5/8") Key 1
14	814-0151	1	Screw, Machine - Flat Head (1/4-20 x 3/4") Key 1
15	855-0011	1	Washer Lock - ET Countersunk (1/4") Key 1

* - Parts Included in 150-1132 Governor Linkage Assembly.

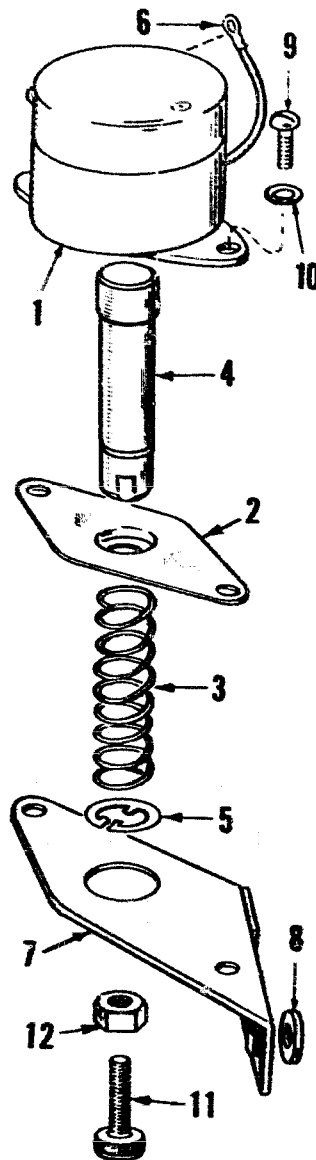
START DISCONNECT



XM-113

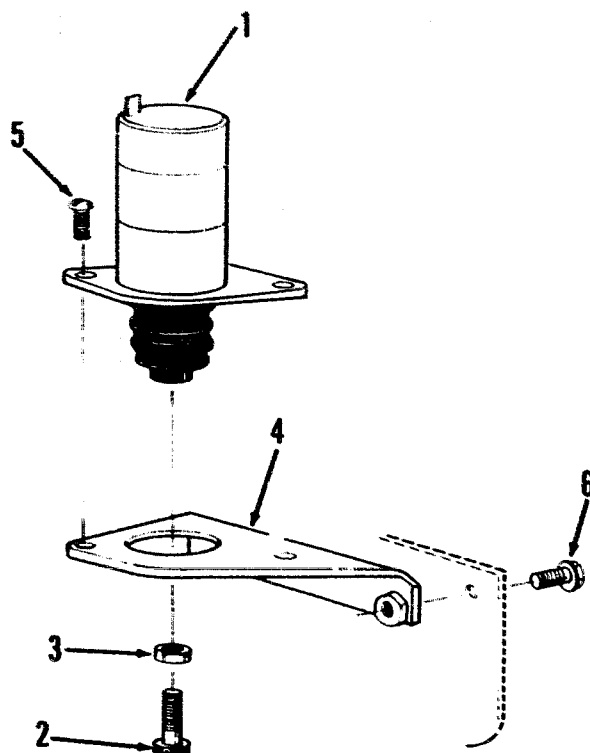
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0496	1	Plate
2	309-0134	1	Switch Assembly (Includes Leads)
3	309-0152	1	Plunger, Switch
4	160-0382	1	Diaphragm, Switch Plunger
5	160-0720	1	Spacer, Switch Plate
6	160-0721	1	Gasket, Plate
7	191-0392	1	Cover, Switch Plate
8	191-0388	1	Control Assembly, Switch
9	160-0711	2	Spring, Weight (Included in Switch Control Assembly)
10	160-0806	1	Disc, Thrust Plunger
11	160-0774	1	Plunger, Thrust
12	160-0773	1	Spring, Thrust Plunger
13	520-0347	1	Stud, Plate Cover (Special)
14	815-0201	2	Screw, Machine - Brass - Round Head with ET (#8-32 x 3/8")
15	865-0011	1	Nut, Wing (#10-32)
16	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
17	850-0050	2	Washer, Lock - Spring (3/8")

STOP SOLENOID (SPEC A THROUGH AC)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	307-0628	1	Solenoid, Stopping
2	306-C162	1	Retainer, Solenoid Plunger
3	306-0161	1	Spring, Solenoid Plunger
4	306-0159	1	Plunger, Solenoid
5	518-0203	1	Ring, Snap - Spring Retaining
6	336-0706	1	Lead, Solenoid Ground
7	306-0158	1	Bracket, Solenoid Mounting
8	526-0180	1	Spacer, Solenoid Bracket Mounting
9	812-0148	2	Screw, Round Head Machine (1/4-20 x 1/2")
10	850-0040	2	Washer, Lock - Spring (1/4")
11	306-0242	1	Screw, Brass - Solenoid Plunger
12	862-0001	1	Nut, Hex (1/4-20)

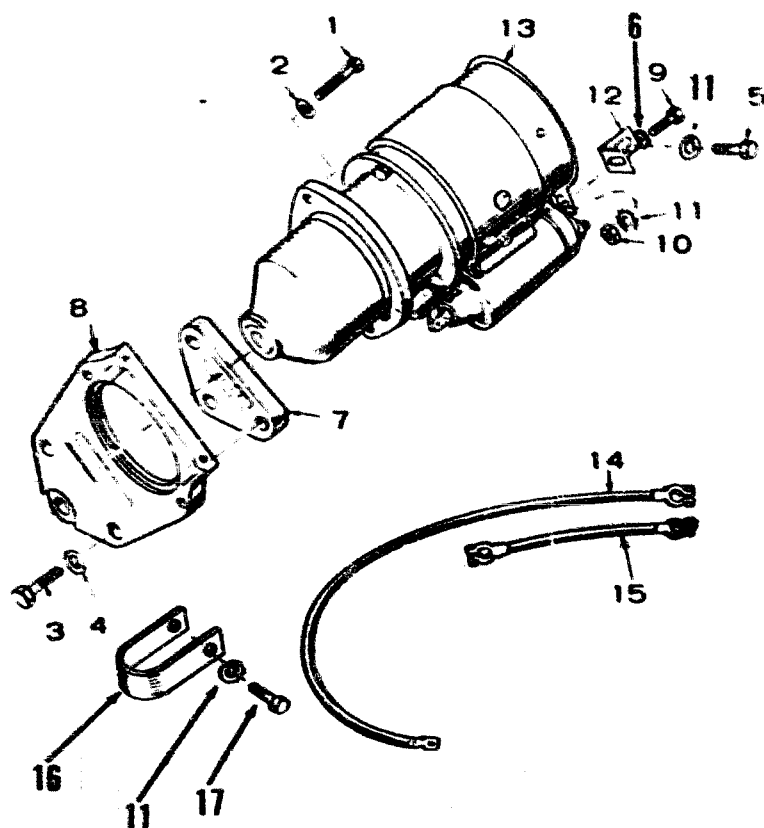
STOP SOLENOID (BEGIN SPEC AD)



ES-1395

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	307-1904	1	Solenoid, Stop
2	306-2256	1	Screw, Solenoid Adjust
3	862-0001	1	Nut, Hex (1/4-20)
4	BRACKET, SOLENOID		
	306-2254	1	Radiator Cooled Sets
	306-2979	1	City Water Cooled Sets
5	821-0010	2	Screw, Hex Locking Head (Flange) (1/4-20 x 1/2")
6	SCREW, HEX LOCKING HEAD (FLANGE) (1/4-20 x 5/8")		
	821-0018	1	Radiator Cooled Sets
	821-0018	2	City Water Cooled Sets

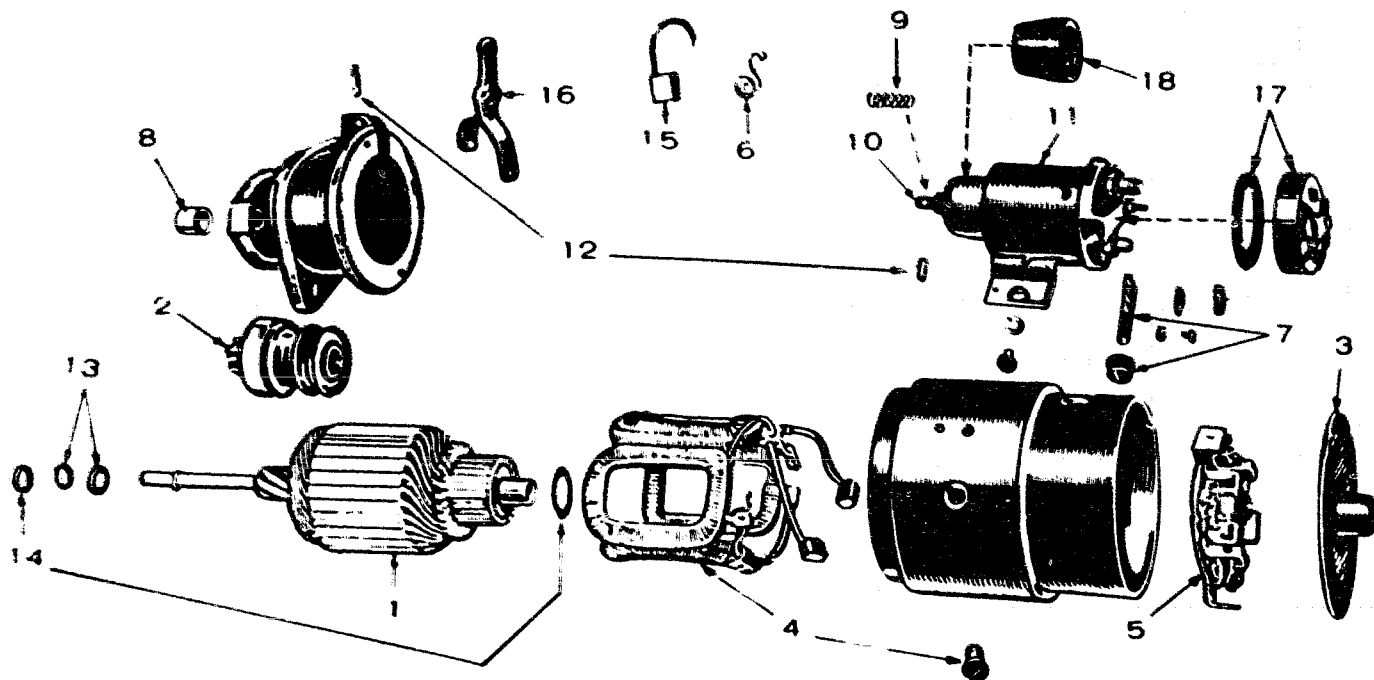
STARTER (SPEC A THROUGH AC)



ES-1517

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
2	850-0050	2	Washer, Lock - Spring (3/8")
3	SCREW, CAP - HEX HEAD		
	800-0053	1	3/8-16 x 1-3/4"
	800-0054	2	3/8-16 x 2"
4	850-0050	3	Washer, Lock - Spring (3/8")
5	800-0052	1	Screw, Cap - Hex Head (3/8-16x 1-1/2")
6	526-0026	1	Washer, Flat (13/32" ID x 3/4" OD x 1/16" Thk)
7	191-0311	1	Spacer, Starter
8	191-1190	1	Flange, Starter
9	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
10	864-0003	1	Nut, Hex (3/8-16)
11	856-0010	3	Washer, Lock - EIT (3/8")
12	191-0365	1	Bracket, Starter
13	191-0324	1	Starter (See Separate Group for Components)
14	CABLE, BATTERY		
	416-0021	2	Sets Without Skid Base (20-1/2")
	416-0037	2	Sets With Skid Base (48")
15	416-0133	1	Cable, Battery Jumper
16	416-0096	1	Clamp, Battery Cable
17	800-0047	1	Screw, Cap - Hex Head (3/8-16 x 5/8")

STARTER PARTS (SPEC A THROUGH AC)

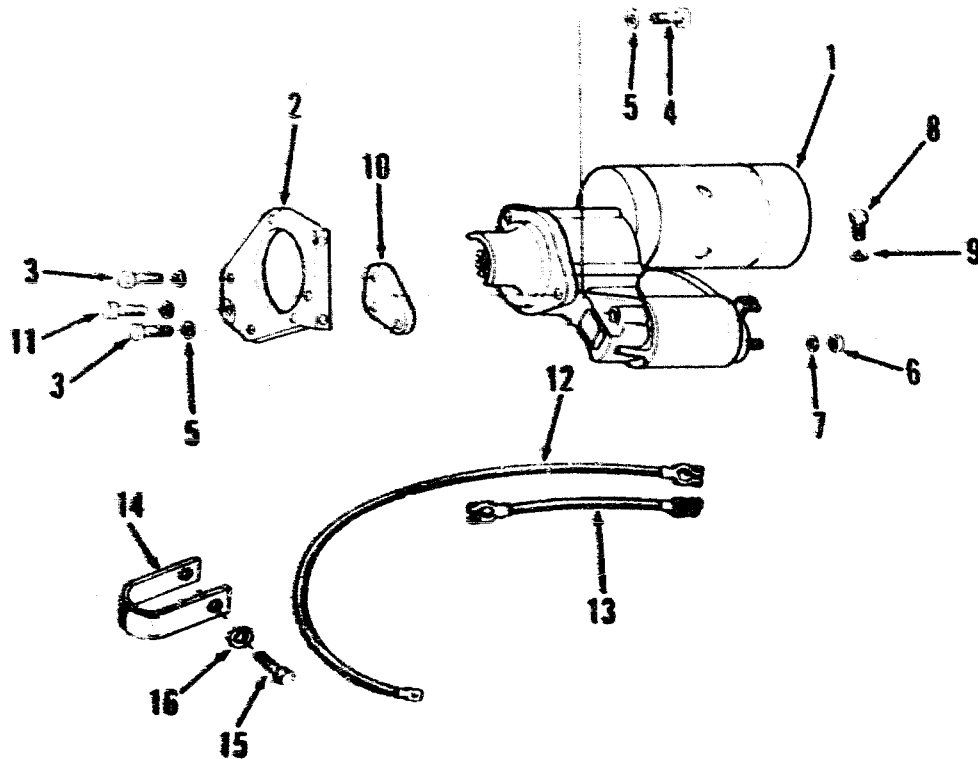


ES-10

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	191-0324	1	Starter
1	191-0712	1	Armature
2	191-0432	1	Clutch
3	191-1023	1	Head Assembly, Commutator End
4	191-1024	1	Coil Package, Field
5	191-1025	1	Plate Assembly, Brush
6	191-1020	1	Spring Set, Brush (Set of 4)
7	191-1263	1	Connector Package
8	191-0497	1	Bearing (Bronze), Drive End
9	191-1027	1	Spring, Plunger
10	191-1026	1	Core Assembly, Moving

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	191-0433	1	Switch, Solenoid
12	191-1029	1	Yoke Parts Package
13	191-1030	1	Stop and Lock Ring Package, Pinion
14	191-1031	1	Thrust Washer Package, Armature (Use as Required)
15	191-0434	1	Brush Set, Service
16	191-1032	1	Yoke
17	191-1569	1	Switch Cover and Stud Package
18	191-1134	1	Boot, Rubber - Part of Moving Core Assembly

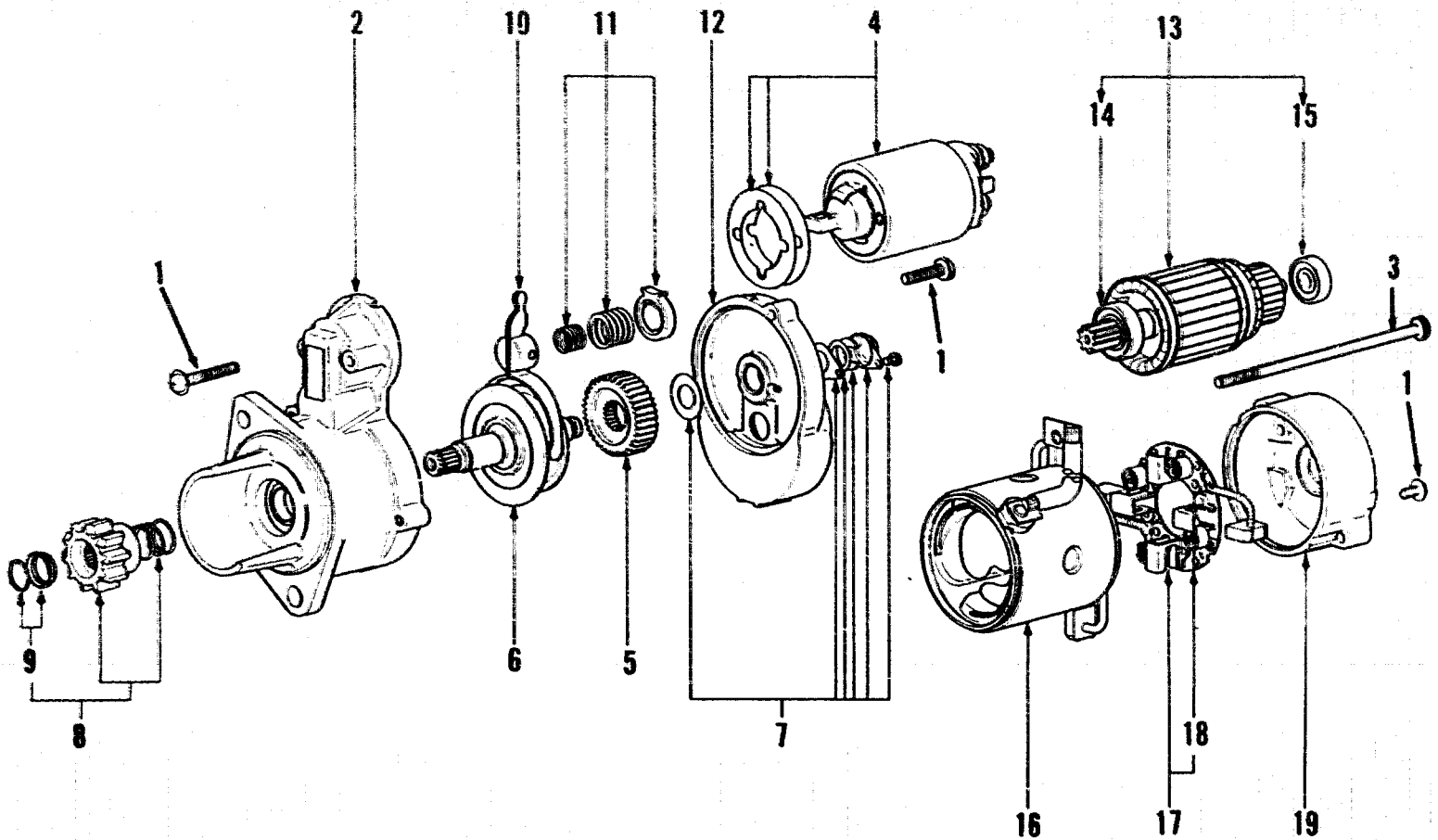
STARTER (BEGIN SPEC AD)



ES-1518

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1399	1	Starter (Includes Parts Marked *) See Separate Group for Components
2	191-1400	1	Flange, Starter Mounting
3	800-0054	2	Screw, Cap - Hex Head (3/8-16 x 2")
4	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
5	850-0050	5	Washer, Lock - Spring (3/8")
6	860-2008	1	*Nut, Hex (M8) B+ Terminal
7	850-2008	1	*Washer, Lock - Spring M8 B+ Terminal
8	800-2000	1	*Screw, Cap - Hex Head (M5 x 8 MM) Solenoid Terminal
9	850-2005	1	*Washer, Lock - Spring (M5) Solenoid Terminal
10	191-0311	1	Spacer, Flange
11	800-0053	1	Screw, Cap - Hex Head (3/8-16 x 1-3/4")
12	CABLE, BATTERY		
	416-0021	2	Sets Without Skid Base (20-1/2")
	416-0037	2	Sets With Skid Base (48")
13	416-0133	1	Cable, Battery Jumper
14	416-0096	1	Clamp, Battery Cable
15	800-0047	1	Screw, Cap - Hex Head (3/8-16 x 5/8")
16	856-0010	1	Washer, Lock - EIT (3/8")

STARTER PARTS (BEGIN SPEC AD)



XES-1361

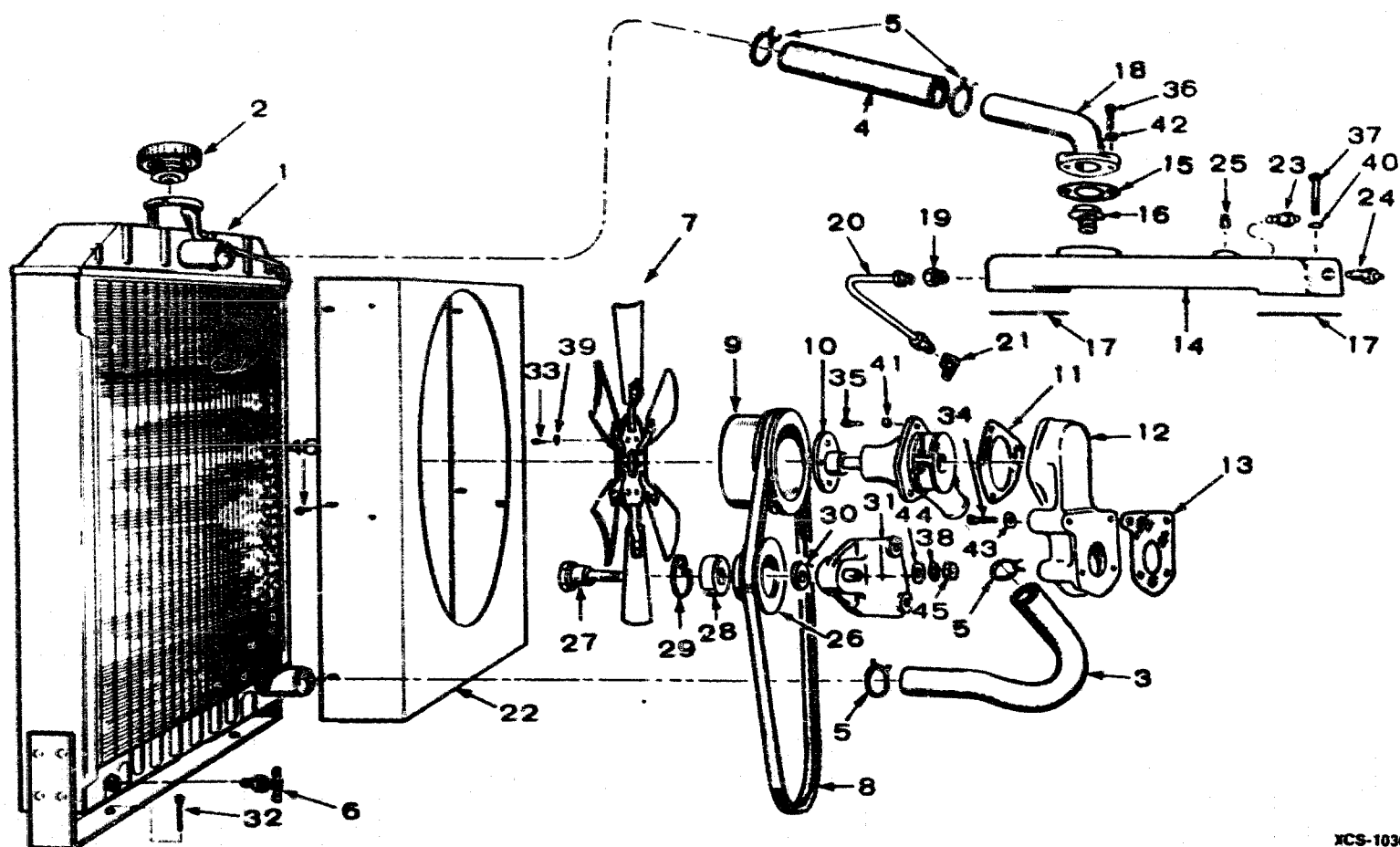
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	191-1399	1	Starter
1	191-1450	1	Screw Set
2	191-1479	1	Bracket, Front - Includes Bearing
3	191-1431	1	Bolt Set
4	191-1486	1	Switch
5	191-1446	1	Gear
6	191-1482	1	Clutch
7	191-1444	1	Cover Set
8	191-1483	1	Pinion Set (Includes Parts Marked *)
9	191-1442	1	*Stopper Set
10	191-1484	1	Lever
11	191-1440	1	Spring Set
12	191-1439	1	Bracket, Center
13	191-1438	1	Armature Assembly (Includes Parts Marked #)
14	191-1437	1	#Bearing, Center
15	191-1436	1	#Bearing, Rear
16	191-1485	1	Yoke - Includes Pole Shoes, Field Coil and Positive Brushes
17	191-1434	1	Holder Assembly, Brush (Includes Negative Brushes and Parts Marked ‡)
18	191-1433	4	‡Spring, Brush
19	191-1432	1	Bracket, Rear

* - Parts Included in 191-1483 Pinion Set

- Parts Included in 191-1438 Armature Assembly

‡ - Parts Included in 191-1434 Brush Holder Assembly

RADIATOR COOLING SYSTEM - KEY 1



XCS-1030

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	RADIATOR		
	130-0569	1	Spec A through AB
	130-1551	1	Begin Spec AC
2	CAP. RADIATOR		
	130-0553	1	Spec A through AB
	130-1672	1	Begin Spec AC
3	HOSE, LOWER RADIATOR		
	503-0204	1	Spec A through AB
	503-1049	1	Begin Spec AC
4	503-0400	1	Hose, Upper Radiator
5	503-0129	4	Clamp, Radiator Hose
6	504-0003	1	Valve, Radiator Drain
7	FAN, RADIATOR		
	130-0343	1	Spec A through AB (4 Blades)
	130-1552	1	Begin Spec AC (6 Blades)
8	BELT, FAN		
	511-0066	1	Spec A through AB
	511-0101	1	Begin Spec AC
9	512-0039	1	Pulley, Water Pump
10	132-0133	1	Pump, Water
	132-0082	1	Repair Kit, Water Pump (Includes Shaft and Bearing, Impeller, Fan Hub, Seal and Mounting Gasket)
11	132-0072	1	Gasket, Water Pump Mounting
12	131-0186	1	Housing, Water Pump
13	131-0139	1	Gasket, Water Pump Housing
14	131-0137	1	Housing, Water Outlet Cylinder Head

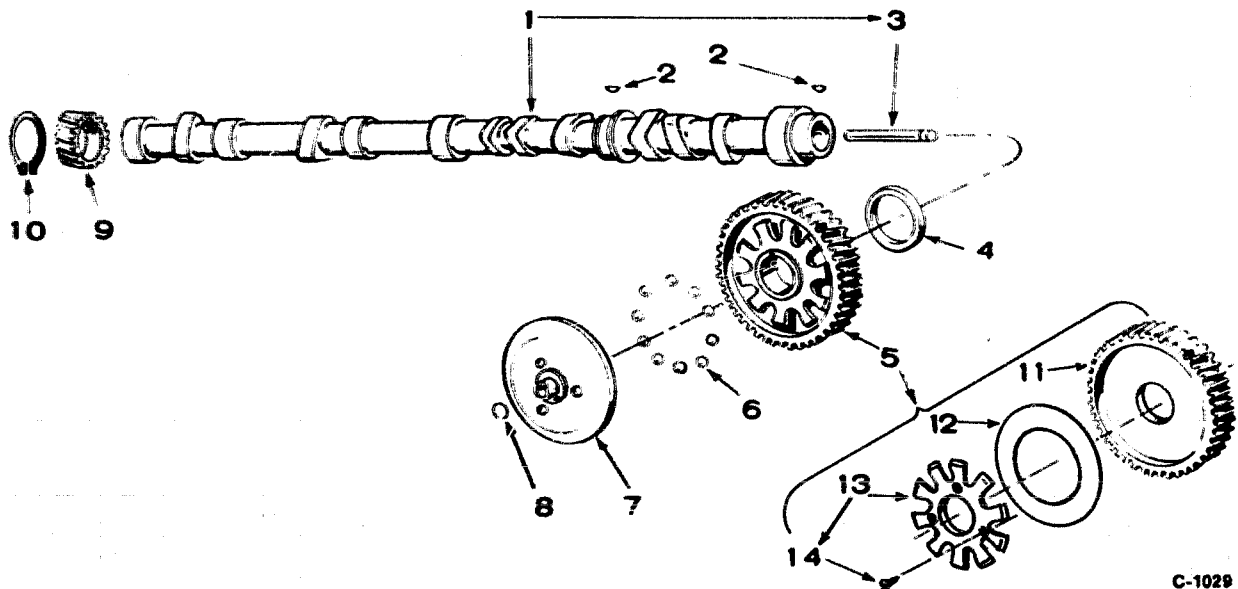
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
15	131-0140	1	Gasket, Water Outlet Elbow
16	309-0054	1	Thermostat
17	309-0145	2	Gasket, Water Outlet Housing
18	131-0138	1	Elbow, Water Outlet
19	502-0036	1	Connector, Inverted Male - By-Pass Line to Housing
20	130-0592	1	Line, Water By-Pass
21	502-0043	1	Elbow, Inverted Male - By-Pass Line to Pump
22	130-1673	1	Shroud, Fan - Begin Spec AC
23	309-0179	1	Switch, High Temperature Cut-Off (Not Used on Pennsylvania Approved Sets)
24	SENDER, WATER TEMPERATURE		
	193-0104	1	Spec A through AA
	193-0246	1	Begin Spec AB
25	PLUG, SQUARE HEAD - Water Outlet Housing		
	505-0110	1	3/8" (Pennsylvania Approved Sets Use 2)
	505-0054	1	1/4" Used on Early Models
26	130-0557	1	Pulley, Idler
27	130-0556	1	Shaft, Idler Pulley
28	510-0025	1	Bearing, Ball
29	518-0210	1	Ring, Snap
30	130-0560	1	Spacer, Idler Pulley
31	130-0680	1	Bracket, Idler Pulley
32	816-0152	2	Bolt, Carriage (3/8-16 x 2") Radiator to Radiator Mounting Support

RADIATOR COOLING SYSTEM - KEY 1

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
SCREW, CAP - HEX HEAD			
33	800-0029	4	5/16-18 x 1-1/8" - Fan and Pulley Mounting
34	800-0064	2	3/8-16 x 4-1/2" - Water Pump Housing Mounting
	800-0057	2	3/8-16 x 2-3/4" - Water Pump Housing Mounting
35	800-0027	2	5/16-18 x 7/8" - Water Pump Mounting
	800-0031	1	5/16-18 x 1-1/2" - Water Pump Mounting
36	800-0030	2	5/16-18 x 1-1/4" - Water Outlet Elbow Mounting
37	800-0034	4	5/16-18 x 2-1/4" - Water Outlet Housing Mounting
WASHER, LOCK - SPRING			
38	850-0060	1	1/2" - Idler Puller Mounting
39	850-0045	4	5/16" - Fan and Pulley Mounting
40	850-0045	4	5/16" - Water Outlet Housing Mounting

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
WASHER, FLAT - COPPER			
41	526-0065	3	21/64" ID x 9/16" OD x 1/16" Thk - Water Pump Mounting
42	526-0065	2	21/64" ID x 9/16" OD x 1/16" Thk - Water Outlet Elbow Mounting
43	526-0066	4	25/64" ID x 9/16" OD x 1/16" Thk - Water Pump Housing Mounting
44	526-0219	1	Washer, Flat (Steel) 17/32" ID x 1" OD x 1/8" Thk - Idler Pulley Mounting
45	110-0707	1	Nut, Hex (Special) Idler Pulley Mounting
46	815-0531	6	Screw, Hex Head Washer (#8-32 x 3/8") - Shroud to Radiator

CAMSHAFT



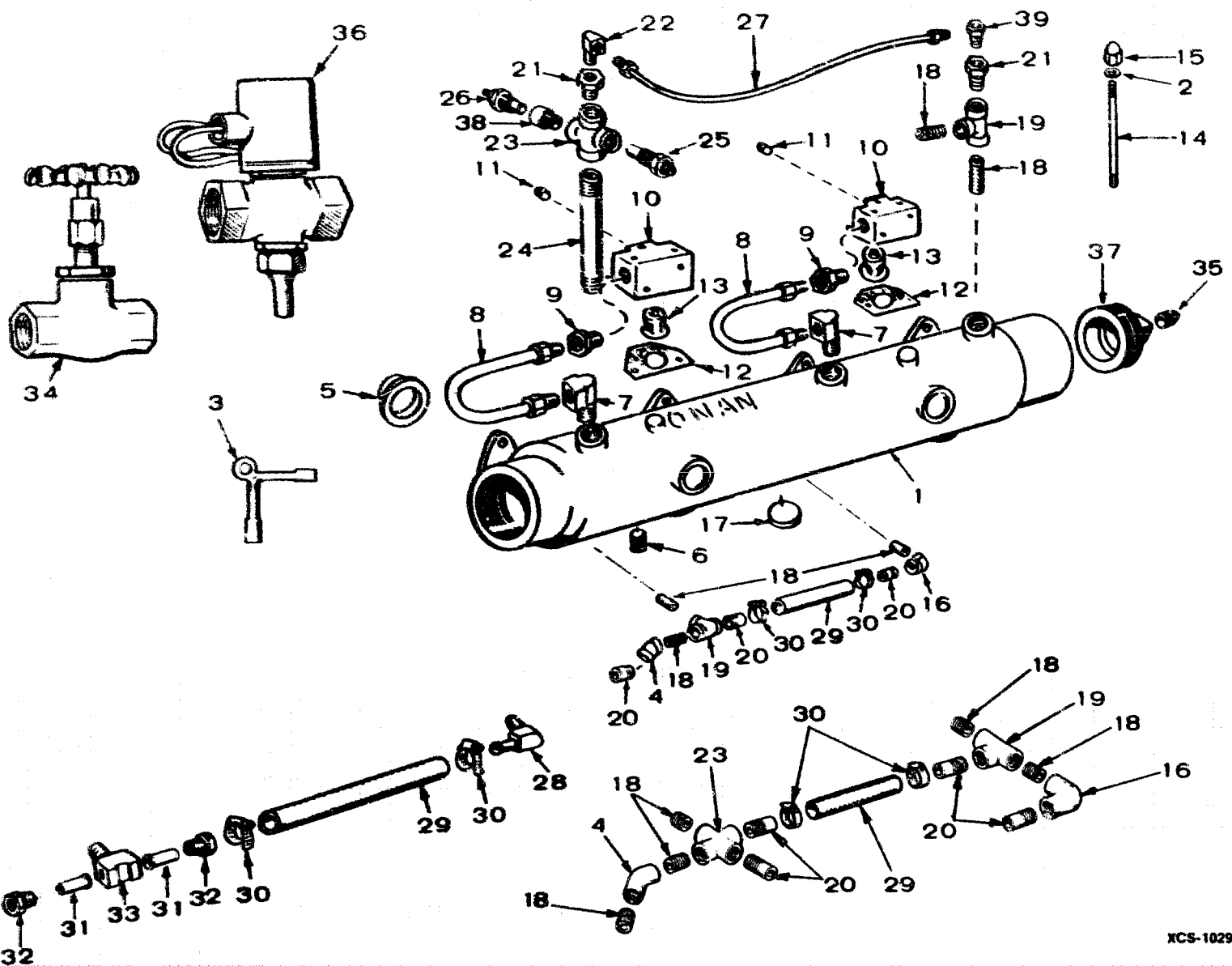
C-1029

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	105-0274	1	Camshaft (Includes Center Pin)
2	515-0001	2	Key - Camshaft Gear and Injection Pump
3	150-0075	1	Pin, Camshaft Center
4	105-0205	1	Washer, Thrust
5	105-0218	1	Gear Assembly, Camshaft (Includes Parts Marked *)
6	510-0046	10	Flyball, Governor
7	150-0775	1	Cup, Governor
8	150-0078	1	Ring, Center Pin
9	147-0142	1	Gear, Injection Pump Drive

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
10	518-0195	1	Ring, Injection Pump Drive Gear
11	105-0465	1	*#Gear, Camshaft
12	150-0773	1	*#Plate, Governor Flyball
13	150-1842	1	*#Spacer Kit, Governor Flyball (Includes Mounting Screws)
14	815-0506	3	*Screw, Spacer Mounting (Special)

* - Parts Included in 105-0218 Camshaft Gear Assembly.
- Camshaft Gear Assemblies With Rivets Order 105-0218 Camshaft Gear Assembly.

CITY WATER COOLING SYSTEM - KEY 2



XCS-1029

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-2124	1	Manifold Assembly, Exhaust - Water Cooled (Includes Parts Marked *)
2	526-0022	4	Washer, Flat (21/64" ID x 9/16" OD x 1/16" Thk)
3	504-0020	1	Key, Valve (Used on Early Style Valve)
4	505-0376	1	Elbow, Pipe (45°)
5	154-1057	4	Gasket, Exhaust Manifold
6	PLUG, PIPE (3/8") - Exhaust Manifold		
	505-0110	1	Square Head (Bottom Mounted)
	505-0266	1	*Countersunk Head (Top Mounted) - Sets With Heat Exchanger
7	ELBOW, INVERTED MALE (Manifold Water Line Inlet)		
	502-0074	2	Sets Without Heat Exchanger
	502-0074	1	Sets With Heat Exchanger
8	130-0510	2	Line, Water - Thermostat Cover to Manifold
9	502-0103	2	Connector, Inverted Male - Thermostat Cover Outlet

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
10	309-0160	2	Cover, Thermostat
11	505-0274	2	Plug, Pipe (1/8") Countersunk - Thermostat Cover
12	309-0145	2	Gasket, Thermostat Cover
13	309-0130	2	Thermostat
14	520-0143	4	Stud, Thermostat Cover Mounting
15	869-0002	4	Nut, Acorn (5/16-24) Thermostat Cover
16	505-0039	1	Elbow, Pipe 90° (3/8" x 1") - Water Inlet
17	*PLUG, EXHAUST MANIFOLD		
	517-0041	4	Expansion (1-1/8" OD)
	517-0059	1	Welch (1-7/16" OD)
18	NIPPLE, CLOSE - PIPE (3/8" x 1")		
	505-0101	5	Sets Without Water Jacket Heater
	505-0101	7	Sets With Water Jacket Heater
19	505-0060	2	Tee, Pipe (3/8") - Water Inlet and Exhaust Manifold
20	NIPPLE, HALF - PIPE (3/8" x 1-1/2") - Water Inlet		
	505-0135	3	Sets Without Water Jacket Heater
	505-0135	4	Sets With Water Jacket Heater

CITY WATER COOLING SYSTEM - KEY 2

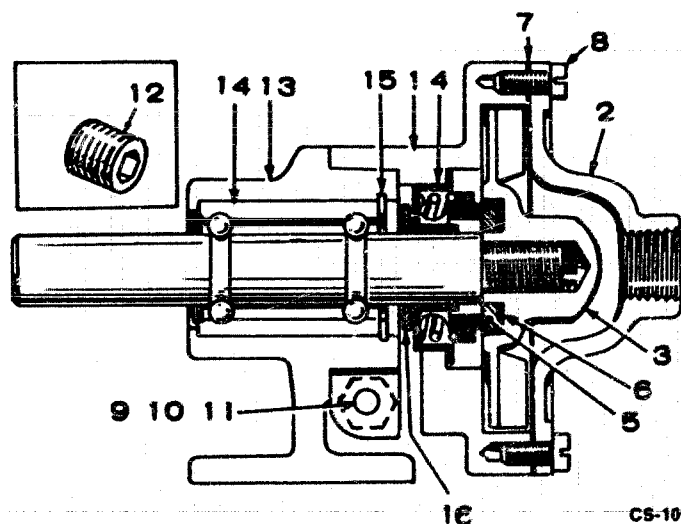
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
21	BUSHING, REDUCER - PIPE - By-Pass Line			29	HOSE, WATER INLET		
	505-0016	2	Sets Without Heat Exchanger		503-0394	1	Used With Brass Fittings (1/2" x 9-5/8")
	505-0016	1	Sets With Heat Exchanger		503-0478	1	Used With Pipe Fittings (3/4" x 9")
22	502-0037	1	Elbow, Brass - By-Pass Line	30	503-0183	2	Clamp, Water Inlet Hose
23	CROSS, PIPE (3/8")			31	130-0533	2	Adapter, Water Inlet Hose (Used on Early Models)
	505-0475	1	Sets Without Water Jacket Heater (Water By-Pass Line)	32	502-0239	2	Nut, Inverted (Brass) Water Inlet (Used on Early Models)
	505-0475	2	Sets With Water Jacket Heater (Water By-Pass Line and Water Inlet)	33	502-0247	1	Tee, Male Branch (Brass) Water Inlet (Used on Early Models)
24	505-0224	1	Nipple, Pipe (3/8" x 4-1/2")	34	504-0019	1	Valve, Globe
25	309-0178	1	Switch, High Water Temperature (Not Used on Pennsylvania Approved Sets)	35	502-0080	1	Plug, Square Head (Brass) - (1/8") Used on Early Models
26	SENDER, WATER TEMPERATURE			36	307-0833	1	Valve, Solenoid
	193-0104	1	Spec A through AA	37	505-0402	1	Plug, Pipe - Square Head (1-1/2") - Begin Spec B
	193-0246	1	Begin Spec AB	38	309-0081	1	Extension, Pipe
27	LINE, WATER BY-PASS			39	502-0097	1	Connector, Brass - By-Pass Line
	130-0633	1	Sets Without Heat Exchanger				
	130-0813	1	Sets With Heat Exchanger				
28	502-0237	1	Elbow, Brass - Water Inlet (Used on Early Models)				

* - Parts Included in 154-2124 Exhaust Manifold Assembly.

WATER PUMP PARTS (KEY 2)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	132-0110	1	Pump, Water
	REPAIR KIT, WATER PUMP		
	132-0241	1	Sets With Flat Area on Shaft (Includes Water Pump Pulley, Set Screw, Key and Parts Marked *)
	132-0240	1	Sets With Keyed Area on Shaft (Includes Parts Marked #)
1		1	Body, Pump (Not Sold Separately)
2	132-0137	1	Cover, Pump
3	132-0114	1	*Impeller
4	132-0101	1	*Seal
5	132-0091	1	*Face, Wear
6	132-0092	1	*Seat, Seal
7	132-0112	1	*Gasket, Cover
8	132-0113	6	*Screw, Cover
9	132-0138	1	Screw, Cap - Used on Early Style Pumps
10	132-0139	1	Lockwasher - Used on Early Style Pumps
11	132-0140	1	Nut, Hex - Used on Early Style Pumps
12	132-0141	1	Plug, Drain - Used on Early Style Pumps
13		1	Pedestal (Not Sold Separately)
14	SHAFT AND BEARING ASSEMBLY		
	132-0239	1	*Sets With Flat Area on Shaft (Repair Kit - Also Includes Water Pump Pulley, Set Screw and Key)
	132-0225	1	#Sets With Keyed Area on Shaft
15	132-0132	1	Ring, Snap
16	132-0224	1	Slinger, Fiber

NOTE: This pump used on sets with optional heat exchanger.

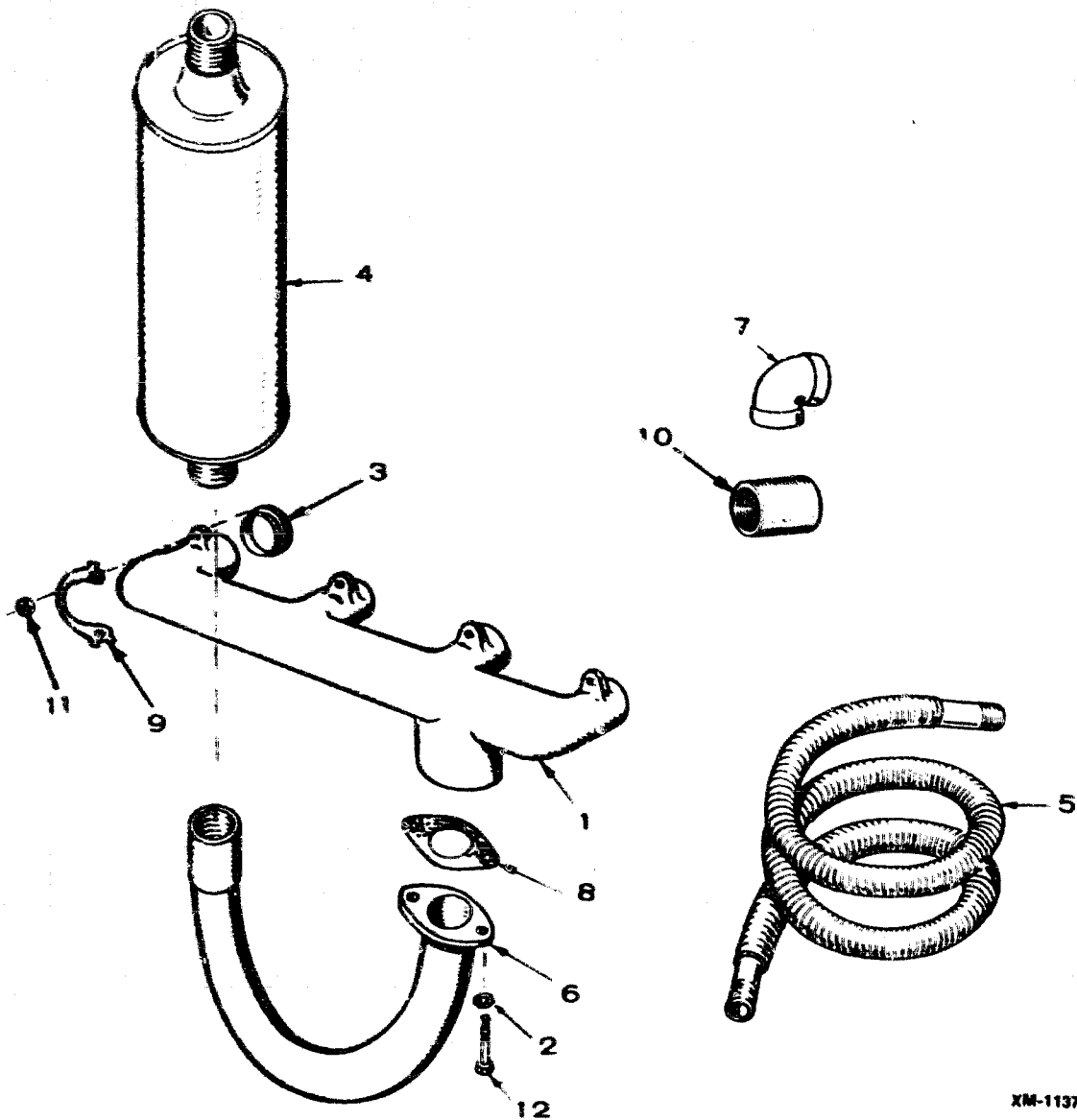


CS-10

* - Parts Included in 132-0241 Repair Kit.

- Parts Included in 132-0240 Repair Kit.

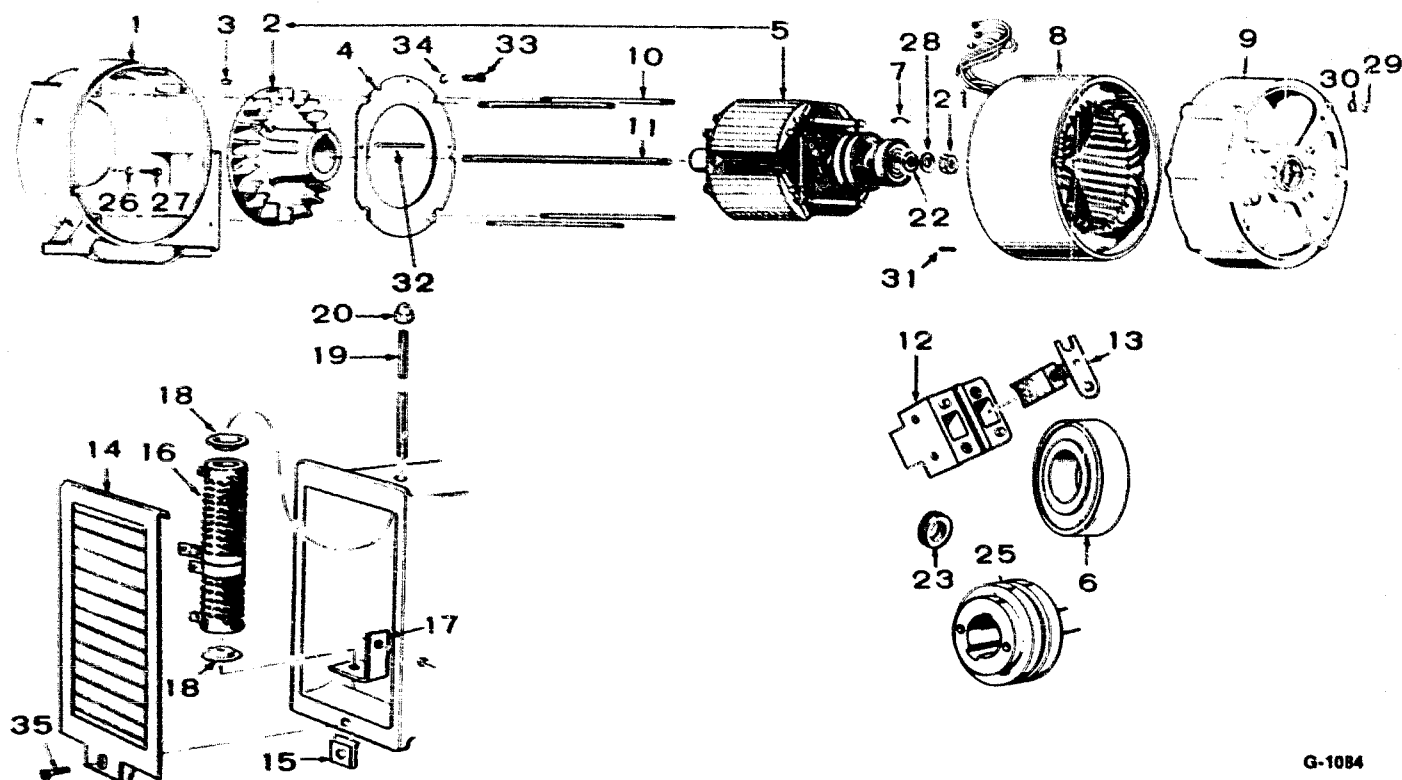
EXHAUST SYSTEM



XM-1137

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-0714	1	Manifold, Exhaust - Key 1
2	850-0050	2	Washer, Lock - Spring (3/8") Exhaust Tube Mounting - Key 1
3	154-1057	4	Gasket, Exhaust Manifold
4	155-0456	1	Muffler, Exhaust (15" lg)
5	TUBE, EXHAUST (Flexible)		
	155-0493	1	36" lg - Key 1, Key 2
	155-0927	1	10" lg - Housed Sets (Used With 155-0360 Critical Muffler)
6	155-0806	1	Tube, Exhaust Outlet - Key 1
7	505-0043	2	Elbow, Pipe (1-1/2"-90°) Housed Sets (Used With 155-0360 Critical Muffler)
8	154-0738	1	Gasket, Exhaust Outlet - Key 1
9	154-1665	4	Tab. Lock - Exhaust Manifold Mounting
10	505-0032	1	Coupling, Pipe (1-1/2") Unhoused Sets
11	110-0445	8	Nut, Hex - Exhaust Manifold Mounting (Special)
12	800-0052	2	Screw, Cap - Hex Head (3/8-16 x 1-1/2") Exhaust Tube Mounting - Key 1

GENERATOR - SPEC A THROUGH Z

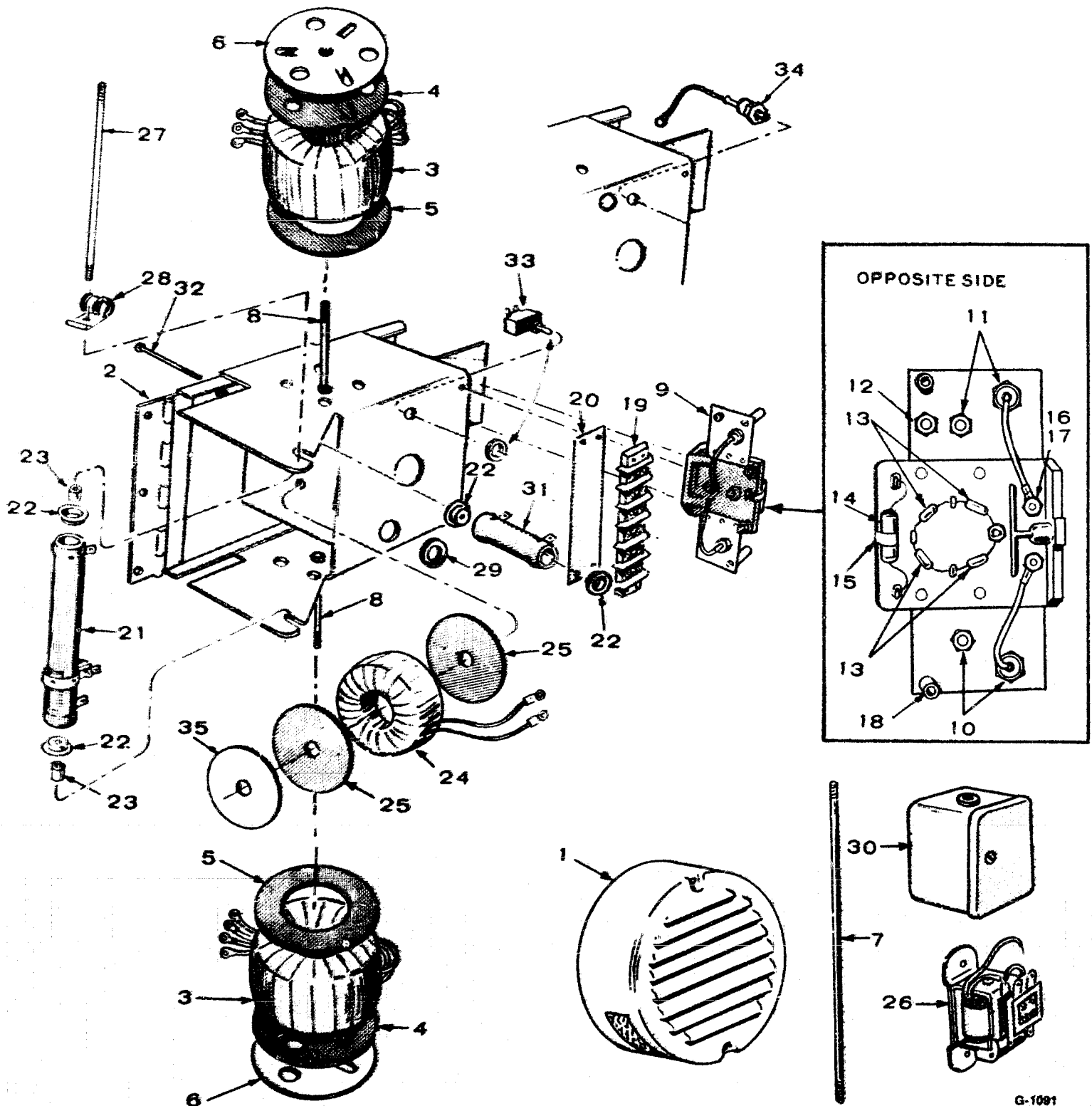


G-1084

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	231-0112	1	Adapter, Engine to Generator
2	205-0064	1	Blower, Generator
3	515-0006	1	Key, Blower
4	234-0162	1	Baffle, Generator Air
5	201-1122	1	Rotor Assembly, Wound (Includes Bearing and Blower)
6	510-0047	1	Bearing, Rotor
7	232-0596	1	Clip, Bearing Stop
8	STATOR ASSEMBLY, WOUND		
	220-0736	1	3R Sets
	220-0737	1	4R Sets
	220-0756	1	4XR Sets
	220-0766	1	5DR Sets
	220-0768	1	9XR Sets
	220-0797	1	53CR Sets
	220-0871	1	57R Sets
9	BELL, END		
	211-0146	1	Sets Without Overspeed Switch
	211-0152	1	Sets With Overspeed Switch
10	520-0640	4	Stud, Generator Through
11	520-0615	1	Stud, Rotor Through
12	212-1064	2	Block, Collector Ring Brush
13	214-0059	4	Brush, Collector Ring
	212-0280	1	Rig Assembly, Brush (Includes Leads, Collector Ring Brushes (4) and Blocks (2) and Hardware) - Not Shown
14	234-0199	1	Cover, Air Outlet
15	870-0177	1	Clip, Air Outlet Cover
16	304-0500	1	Resistor, Tapped Adjustable

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
17	232-1565	1	Bracket, Resistor Mounting
18	304-0006	2	Washer, Resistor Centering
19	520-0620	1	Stud, Resistor Mounting
20	866-0001	1	Nut, Resistor Mounting
21	870-0203	1	Nut, Rotor through Stud
22	232-0200	1	Washer, Tapered - Rotor through Stud
23	GROMMET, RUBBER		
	508-0095	1	Air Baffle
	508-0112	1	Lead Outlet
25	204-0061	1	Ring, Collector
26	850-0040	4	Washer, Lock - Generator Adapter Mounting
27	SCREW, HEX CAP - GENERATOR ADAPTER MOUNTING		
	800-0051	2	3/8-16 x 1-1/4"
	800-0050	2	3/8-16 x 1"
28	850-0055	1	Washer, Lock (7/16")
29	862-0015	4	Nut, Hex (5/16-18) - Generator through Stud
30	850-0045	4	Washer, Lock (5/16")
31	516-0138	2	Pin, Roll (3/16" x 5/8") - Alignment
32	515-0103	1	Key, Blower to Rotor
33	813-0098	5	Screw (10-32 x 3/8") - Baffle Mounting
34	850-0030	5	Washer, Lock (#10)
35	812-0102	1	Screw, Round Head - Air Outlet Cover Mounting

GENERATOR EXCITER - SPEC A THROUGH Z



G-1091

NOTE: 06SX1N1B used on 60 cycle 120/240 volt, 277/480 volt, and 347/600 volt 3 phase sets.
 06SX1N3B used on all 60 cycle sets except 120/240 volt, 277/480 volt, and 600 volt 3 phase sets.
 06SX51N1B used on 50 cycle sets 120/240 volt, 277/480 volt, and 600 volt 3 phase sets.
 06SX51N3B used on all 50 cycle sets except 120/240 volt, 277/480 volt, and 600 volt, and 347/600 volt 3 phase sets.

Check set nameplate for Magnecciter number and use correct column.

GENERATOR EXCITER - SPEC A THROUGH Z

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED										
			A	B	C	D	E	F	G	H	J	K	
		02SX1N1A Use Column A	X										
		04SX1N1A Use Column B		X									
		04SX1N1B Use Column C			X								
		04SX1N3B Use Column D				X							
		06SX1N1A Use Column E					X						
		06SX1N1B Use Column F						X					
		06SX1N3B Use Column G							X				
		06SX51N1A Use Column H								X			
		06SX51N1B Use Column J									X		
		06SX51N3B Use Column K										X	
	209-0001	Exciter, Complete (Less Cover)	1										
	209-0002	Exciter, Complete (Less Cover)		1									
	209-0003	Exciter, Complete (Less Cover)			1								
	209-0005	Exciter, Complete (Less Cover)				1							
	209-0007	Exciter, Complete (Less Cover)					1						
	209-0008	Exciter, Complete (Less Cover)						1					
	209-0010	Exciter, Complete (Less Cover)							1				
	209-0011	Exciter, Complete (Less Cover)								1			
	209-0012	Exciter, Complete (Less Cover)									1		
	209-0013	Exciter, Complete (Less Cover)										1	
1	234-0154	• Cover, Exciter	1	1			1			1			
1	234-0185	• Cover, Exciter			1	1		1	1		1		
2	234-0153	Panel Only, Exciter	1	1			1			1			
2	234-0188	Panel Only, Exciter			1	1		1	1		1		
3	315-0084	Reactor, Gate	2										
3	315-0099	Reactor, Gate		2	2	2							
3	315-0102	Reactor, Gate					2	2	2				
3	315-0104	Reactor, Gate								2	2		
4	232-1553	Gasket, Gate Reactor Mounting - Outer	2	2	2	2		2	2		2		
4	232-1608	Gasket, Gate Reactor Mounting - Outer					2			2			
5	232-1551	Gasket, Gate Reactor Mounting - Inner	2	2	2	2	2	2	2	2	2		
6	232-1552	Retainer, Gate Reactor	2	2	2	2		2	2		2		
6	234-0191	Retainer, Gate Reactor					2			2			
7	520-0211	Stud, Gate Reactor Mounting	1	1			1			1			
8	800-0013	Screw, Cap - Hex Head (1/4-20 x 2-1/2")			2	2							
8	800-0015	Screw, Cap - Hex Head (1/4-20 x 3")						2	2		2		
9	305-0259	Rectifier Assembly (Includes Parts Marked †)	1	1	1								
9	305-0387	Rectifier Assembly (Includes Parts Marked Δ)				1							
9	305-0264	Rectifier Assembly (Includes Parts Marked *)					1	1		1	1		
9	305-0388	Rectifier Assembly (Includes Parts Marked £)								1			
10	305-0238	†Δ£ Rectifier Only, Power Field (Negative)	2	2	2	2	2	2	2	2	2		
11	305-0239	†Δ£ Rectifier Only, Power Field (Positive)	2	2	2	2	2	2	2	2	2		
12	305-0239	Δ£ Rectifier Only, Field Flash				1				1			
13	305-0240	†Δ£ Rectifier, Voltage Control	4	4	4	4	4	4	4	4	4		

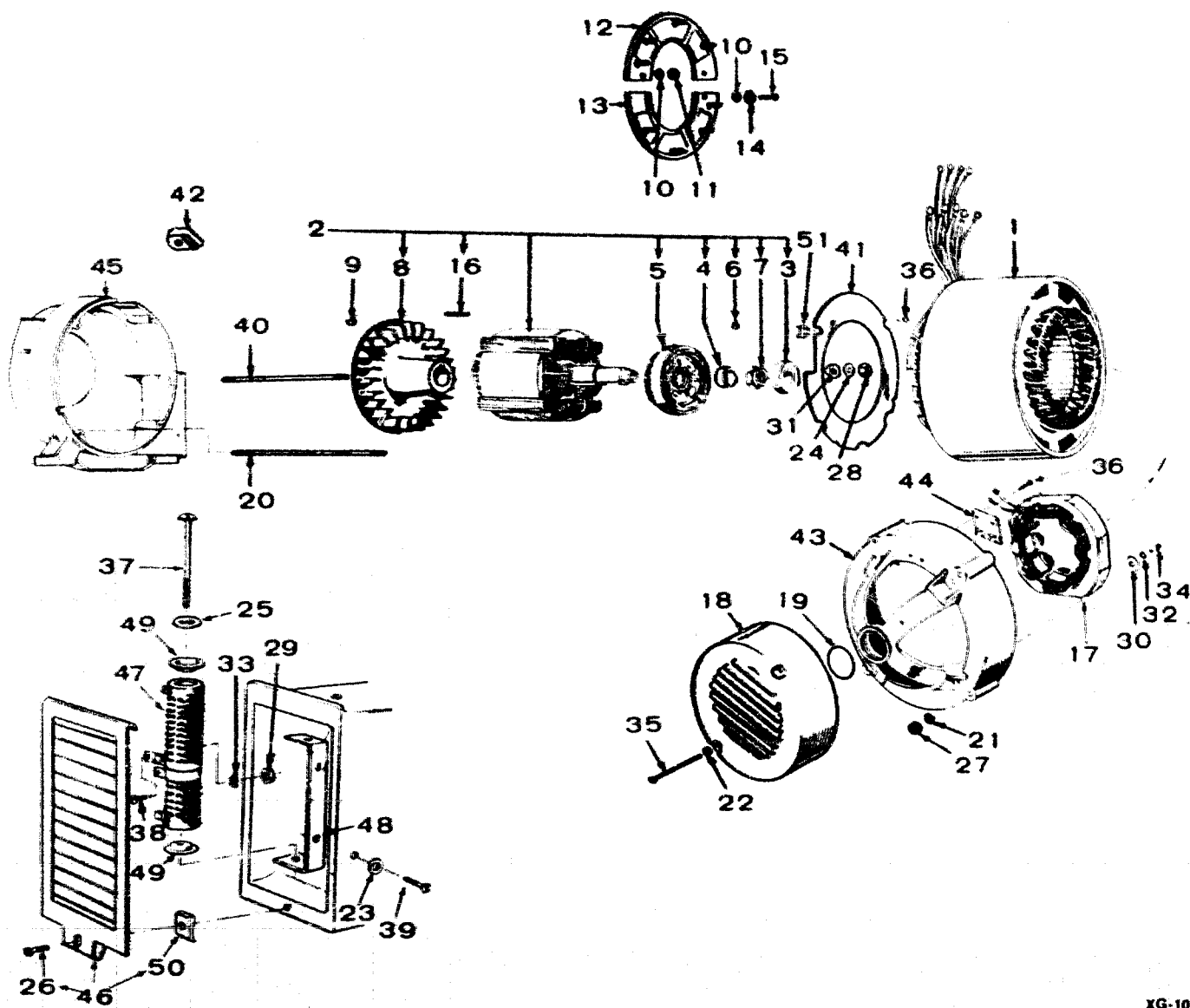
GENERATOR EXCITER - SPEC A THROUGH Z

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED									
			A	B	C	D	E	F	G	H	J	K
14	304-0476	†ΔResistor (500-Ohm, 5 Watt)	1	1	1	1						
14	304-0512	*£Resistor (150-Ohm, 50 Watt)					1	1	1	1	1	1
15	304-0498	†Δ*£Clip, Resistor Mounting	1	1	1	1	1	1	1	1	1	1
16	332-0697	†Δ*£Stud, Terminal (Flat Head)	2	2	2	2	2	2	2	2	2	2
17	332-0698	†Δ*£Stud, Terminal (Extended Slotted Head)	1	1	1	1	1	1	1	1	1	1
18	870-0196	†Δ*£Fastener (Compression Type)	2	2	2	2	2	2	2	2	2	2
19	332-0699	Block, Terminal	1	1			1			1		
19	332-0745	Block, Terminal			1	1		1	1		1	1
20	332-0700	Strip, Block Marker	1									
20	332-0738	Strip, Block Marker		1			1			1		
20	332-0746	Strip, Block Marker			1			1			1	
20	332-0925	Strip, Block Marker				1			1			1
21	304-0489	Resistor, Fixed (200-Ohm, 50 Watt)	1									
21	304-0511	Resistor, Tapped - 500-Ohm (425 Fixed, 75 Adj.)		1			1			1		
21	304-0527	Resistor, Tapped - 500-Ohm (425 Fixed, 75 Adj.)			1	1		1	1		1	1
22	304-0015	Washer, Centering - Resistor	2	4	4	4	4	4	4	4	4	4
23	232-1473	Spacer, Resistor Mounting	2									
23	232-1550	Spacer, Resistor Mounting		2			2			2		
23	232-1474	Spacer, Resistor Mounting			2	2		2	2		2	2
24	315-0085	Reactor, Voltage Control	1									
24	315-0100	Reactor, Voltage Control		1	1	1	1	1	1			
24	315-0105	Reactor, Voltage Control								1	1	1
25	232-1548	Gasket, Voltage Control Reactor	2	2	2	2	2	2	2	2	2	2
26	307-0584	Relay, Field Build-Up	1									
27	520-0641	Stud, Tapped Resistor Mounting	1		1	1		1	1		1	1
27	812-0116	Screw, Tapped Resistor Mounting (RHMS #10-24 x 4-1/2")		1			1			1		
28	332-0050	Clip, Loop	1	1			1			1		
28	332-0052	Clip, Loop			1	1		1	1		1	1
29	508-0008	Grommet, Rubber (For 7/8" Hole)	1	1	1	1	1	1	1	1	1	1
30	307-0643	Cover, Field Relay	1									
31	304-0510	Resistor, Fixed (250-Ohm, 25 Watt)		1	1	1	1	1	1	1	1	1
32	813-0112	Screw, Fixed Resistor Mounting (RHMS #10-32 x 2-1/2")		1	1	1	1	1	1	1	1	1
33	308-0175	Switch, Residual Reset			1			1			1	
34	305-0238	Rectifier, Power Field - Negative				1			1			1
35	526-0173	Washer, Retainer - Voltage Control Reactor	1	1	1	1	1	1	1	1	1	1
ASSOCIATED HARDWARE (NOT ILLUSTRATED)												
		SCREW, MACHINE - ROUND HEAD										
	812-0156	1/4-20 x 1-1/2"						As Required				
	813-0101	#10-32 x 9/16"						As Required				
	811-0098	#10-32 x 3/8" (Brass)						As Required				
	813-0098	#10-32 x 3/8"						As Required				
	815-0190	#8-32 x 3/8"						As Required				
	815-0198	#8-32 x 5/8"						As Required				
	815-0001	Screw, Machine - Binder Head (Brass) (#6-32 x 1/4")						As Required				

GENERATOR EXCITER - SPEC A THROUGH Z

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED										
			A	B	C	D	E	F	G	H	J	I	
		WASHER, FLAT											
	526-0003	11/64" ID x 3/8" OD x 1/32" Thk					As Required						
	526-0048	.172" ID x 3/8" OD x 1/32" Thk					As Required						
	526-0049	.200" ID x 7/16" OD x 1/32" Thk					As Required						
	526-0179	7/32" ID x 5/8" OD x 1/16" Thk					As Required						
		WASHER, LOCK - SPRING											
	850-0030	#10					As Required						
	850-0040	1/4"					As Required						
	853-0005	Washer, Lock - ET					As Required						
		WASHER, LOCK - IT											
	854-0007	#8					As Required						
	854-0010	#10					As Required						
	854-0014	1/4"					As Required						
		NUT, HEX											
	860-0008	#8-32					As Required						
	860-0011	#10-24					As Required						
	862-0001	1/4-20					As Required						
	870-0053	#10-32					As Required						
	871-0005	#6-32 (Brass)					As Required						
	871-0007	#8-32 (Brass)					As Required						
	871-0010	#10-32 (Brass)					As Required						
		• - Use 234-0223 cover for housed sets. † - Parts included in 305-0259 Rectifier Assembly. Δ - Parts included in 305-0387 Rectifier Assembly. • - Parts included in 305-0264 Rectifier Assembly. £ - Parts included in 305-0388 Rectifier Assembly.											

GENERATOR - BEGIN SPEC AA



XG-1074

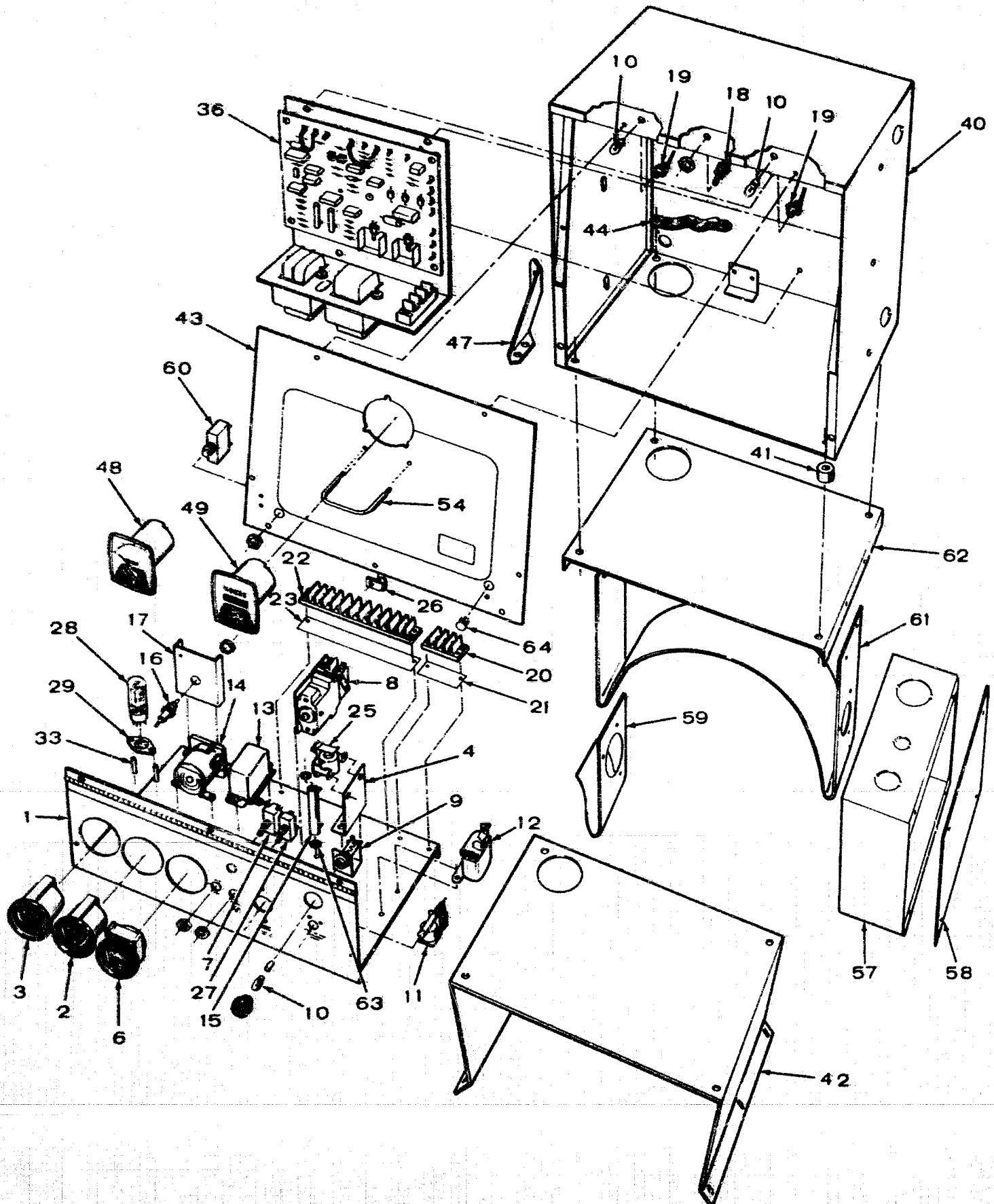
GENERATOR - BEGIN SPEC AA

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	STATOR, GENERATOR			27	862-0011	4	Nut, Hex (3/8-16 - Generator Through Stud
	220-2027	1	14.5 RDJF Single Phase	28	870-0203	1	Nut, Hex (7/16-20) - Rotor Through Stud
	220-2052	1	14.5 RDJF Three Phase	29	871-0010	1	Nut, Hex - Brass (#10-32) Resistor Tap
	220-2018	1	15.0 RJDF Single Phase	30	526-0260	2	Washer, Flat (Special) - Exciter Stator
	220-2043	1	15.0 RJDF Three Phase	31	232-0200	1	Washer - Cone Shaped (Special) Rotor Through Stud
	220-2019	1	16.0 RDJF Single Phase	32	853-0013	2	Washer, Lock (1/4" ET) - Exciter Stator
	220-2044	1	16.0 RDJF Three Phase	33	856-0003	1	Washer, Lock (#10 EIT) - Resistor Tap
	220-2019	1	17.5 RDJF Single Phase	34	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8") - Exciter Stator Mounting
	220-2044	1	17.5 RDJF Three Phase	35	SCREW, MACHINE - ROUND HEAD (End Bell Cover Mounting)		
	220-2287	1	All Except 347/600 Volts 347/600 Volt		812-0165	2	Sets Without Overspeed Switch (1/4-20 x 4-1/2")
2	ROTOR ASSEMBLY, GENERATOR (Includes Parts Marked *)				812-0167	2	Sets With Overspeed Switch (1/4-20 x 6")
	201-2159	1	All Except 15.0 RDJF	36	815-0194	6	Screw, Hex Head - Thread Cutting with ET (#10-32 x 3/8") Board (2) and Baffle (4) Mounting
	201-2158	1	15.0 RDJF	37	812-0169	1	Screw, Machine - Round Head (1/4-20 x 5-1/2") - Resistor Through
3	510-0112	1	*Bearing, Rotor	38	811-0098	1	Screw, Machine - Round Head (Brass) (#10-32x 3/8") - Resistor Tap
4	232-2398	1	*Spacer, Bearing	39	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8") - Resistor Bracket
5	201-2151	1	*Rotor, Exciter	40	STUD, ROTOR THROUGH		
6	515-0094	1	*Key, Exciter Rotor		520-0791	1	All Except 15.0 RDJF
7	870-0284	1	*Nut, Exciter Rotor Locking		520-0790	1	15.0 RDJF
8	205-0105	1	*Fan, Generator	41	234-0462	1	Baffle, Air
9	515-0006	1	Key, Fan to Crankshaft	42	508-0112	1	Grommet, Rubber - Generator Adapter (2-3/4" x 1-7/8")
10	526-0008	12	*Washer, Flat (13/64" ID x 7/16" OD x 1/32" Thk)	43	211-0237	1	Bell, End
11	870-0131	8	*Nut, Hex (#10-32)	44	232-2418	1	Board, Connection
12	358-0069	1	*Rectifier Assembly - Positive	45	231-0171	1	Adapter, Generator
13	358-0070	1	*Rectifier Assembly - Negative	46	234-0494	1	Cover Assembly, Air Outlet (Includes Parts Marked #)
14	853-0008	4	*Washer, Shakeproof (#10)	47	304-0500	1	Resistor, Tapped - Adjustable (2 Ohm, 150 Watt)
15	813-0100	4	*Screw, Round Head (#10-32 x 1/2")	48	232-2399	1	Bracket, Resistor Mounting
16	515-0103	1	*Key, Fan to Rotor	49	304-0006	2	Washer, Centering - Resistor Mounting
17	220-2009	1	Stator, Exciter	50	870-0177	1	#Nut, Speed (#10)
18	COVER, END BELL			51	508-0095	1	Grommet, Rubber - Air Baffle (25/32" x 21/32")
	234-0185	1	Sets Without Generator Space Heater or Overspeed Switch				
	234-0498	1	Sets With Overspeed Switch				
	234-0542	1	Sets With Generator Space Heater				
	234-0543	1	Sets With Generator Space Heater and Overspeed Switch				
19	509-0094	1	Seal, Bearing ("O" Ring)				
20	STUD, GENERATOR THROUGH						
	520-0799	4	All Except 15.0 RDJF				
	520-0798	4	15.0 RDJF				
21	850-0050	4	Washer, Lock - Spring (3/8") - Generator Through Stud				
22	850-0040	2	Washer, Lock - Spring (1/4") - End Bell Cover				
23	850-0040	2	Washer, Lock - Spring (1/4") - Resistor Bracket				
24	850-0055	1	Washer, Lock - Spring (7/16") - Rotor Through Stud				
25	853-0013	1	Washer, Lock (1/4" ET) - Resistor Through Screw				
26	809-0046	1	*Screw, Sheet Metal - Round Head (#10 x 3/4")				

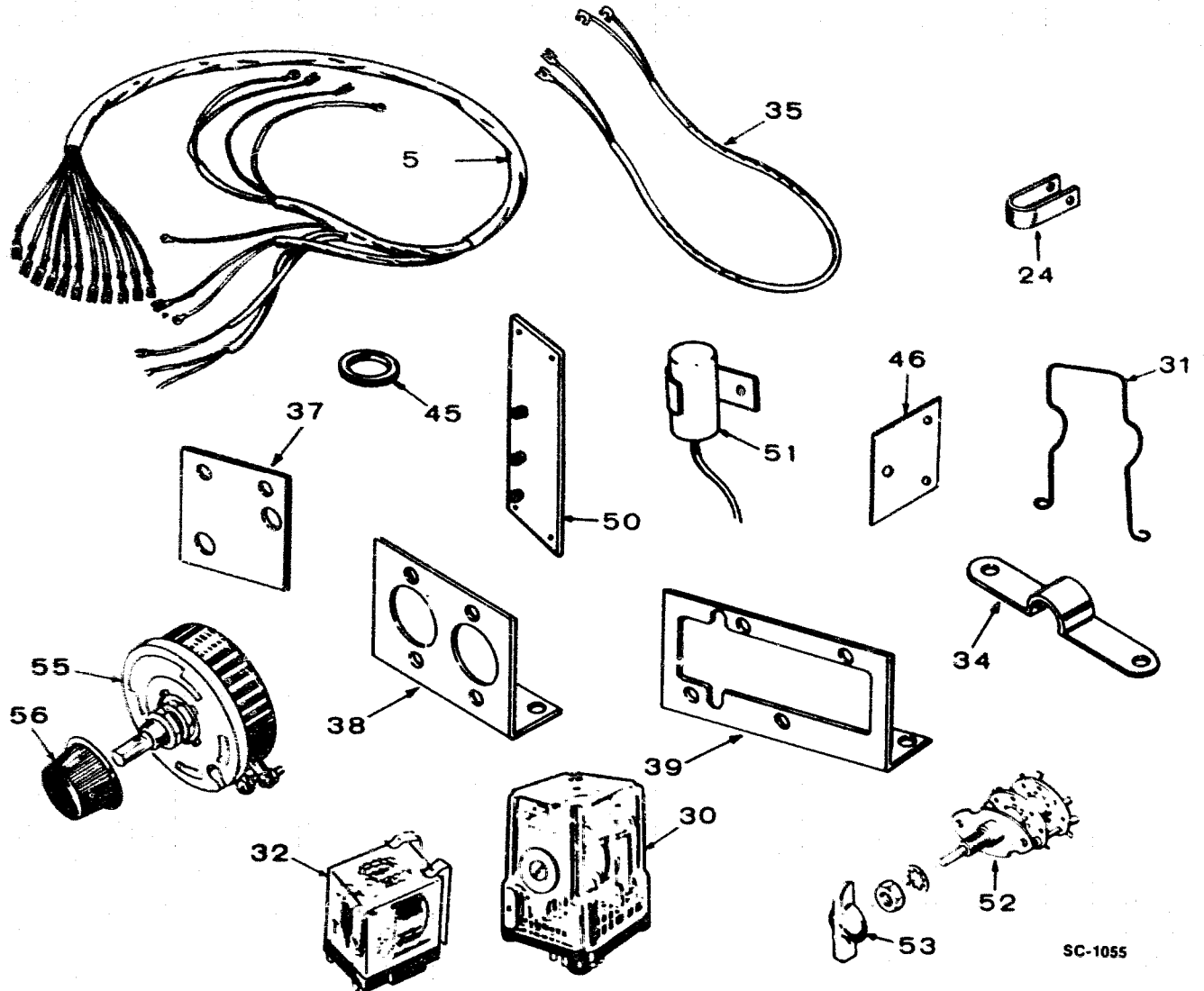
* - Parts Included in Generator Rotor Assemblies.

- Parts Included in 234-0494 Cover Assembly.

CONTROL



CONTROL



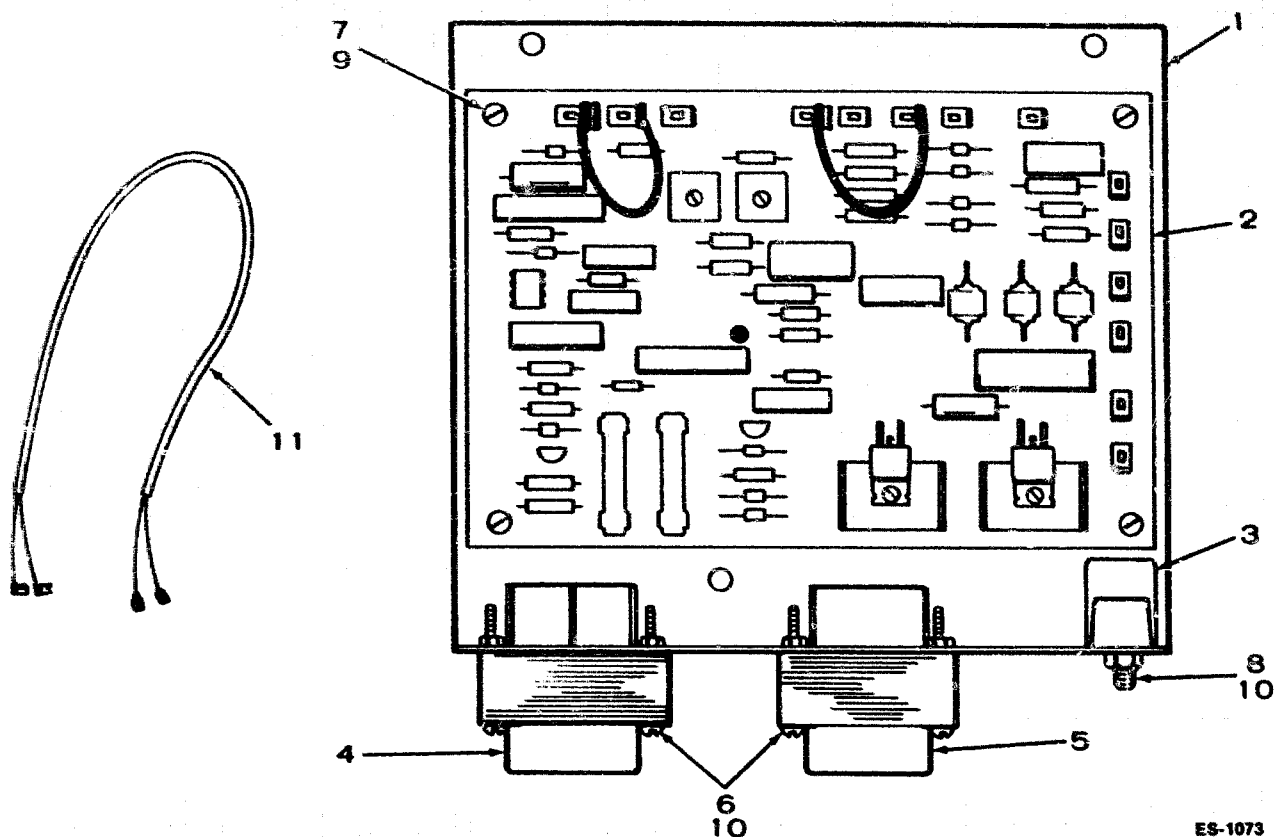
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REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PANEL, LOWER CONTROL			9	322-0069	1	Receptacle, Signal Light (Not Used on Pennsylvania Approved Sets)
	301-2124	1	Sets With 1 Signal Light	10	322-0004	3	Bulb, Signal and Panel Light
	301-2125	1	Sets With 4 Signal Lights	11	307-0655	1	Relay, Emergency Latching (Not Used on Pennsylvania Approved Sets)
	301-2895	1	Pennsylvania Approved Sets Without Signal Lights	12	307-0052	1	Relay, Start Disconnect
2	GAUGE, WATER TEMPERATURE			13	307-0597	1	Relay, Fuel Solenoid
	193-0106	1	Spec A through AA	14	307-0514	2	Relay - Starter Pilot and Manifold Heater
	193-0245	1	Begin Spec AB	15	304-0192	1	Resistor, Cranking Limiter (3 Ohm, 10 Watt)
3	GAUGE, OIL PRESSURE			16	305-0673	1	Rectifier, Charge (10 Amp, 100 Volt) - Includes Mounting Hardware
	193-0107	1	Spec A through AA	17	305-0254	1	Bracket, Rectifier Mounting
	193-0243	1	Spec AB	18	308-0002	1	Switch, Panel Light
	193-0272	1	Begin Spec AC	19	322-0072	2	Receptacle, Panel Light
4	301-1685	1	Bracket, Time Delay Relay Mounting (Sets With Low Oil Pressure Switch)	20	332-0611	1	Block, Terminal - 3 Place
5	338-0298	1	Harness, Wiring - Engine to Control	21	332-1009	1	Strip, Marker - 3 Place
6	302-1366	1	Ammeter, Charge	22	BLOCK, TERMINAL		
7	SWITCH, SELECTOR (Begin Spec D)				332-0607	1	Sets With 1 Signal Light (12 Place)
	308-0220	1	All Except Pennsylvania Approved Sets (Run-Stop-Remote)		332-1005	1	Sets With 4 Signal Lights (20 Place)
	308-0068	1	Pennsylvania Approved Sets (Run-Remote)		332-0795	1	Pennsylvania Approved Sets Without Signal Lights (16 Place)
8	LIMITER, CRANKING						
	320-0104	1	Spec A through AA				
	320-0259	1	Begin Spec AB				

CONTROL

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
13	118-1060	1	Set, with 1 Signal Light (No Plate)	43	PANEL, UPPER CONTROL - Sets With 4 Optional Meter Panels		Spec A through Z
	332-0936	1	Set, with 4 Signal Lights (No Plate)	301-1135	1		4 - Except Pennsylvania Approved Sets
	332-0932	1	Panel, Lamp Approved Sets With 4 Signal Lights (No Plate)	301-2019	1		Pennsylvania Approved Sets
24	316-0096	1	Frame, Harness Support	301-2019	1		Begin Spec AA
25	307-0365	1	Relay, Time Delay - Sets With Low Oil Pressure Switch				All Except Pennsylvania Approved Sets
26	L110, HARNESS SUPPORT			301-1758	1		Pennsylvania Approved Sets
	332-0061	1	1 1/8" ID	44	STRAP, GROUND (Unhoused Sets)		
	332-0052	1	5/8" ID	337-0044	1		Spec A through Z
27	308-0037	1	Switch, Manifold Heater	337-0036	1		Begin Spec AA
28	307-0845	1	Relay, Time Delay Preheat (20 Seconds) - Not Based on Sets With Continuous Glow Plug Control	45	GROMMET, RUBBER		
				308-0063	2		2-3/4" Hole - Unhoused Sets
29	313-0321	1	Socket, Time Delay Preheat Relay				Housed Sets Use 1)
30	307-0819	1	Relay, Sets With Lock Engine Temperature Switch	308-0153	1		1-3/4" Hole - Output Box
31	307-0778	1	Spring, Relay Holddown - Sets With Low Engine Temperature Switch	46	301-0845	1	Plate, Ground - Spec A through Z
32	307-0660	1	Relay, Field Build-Up (Pennsylvania Approved Sets)	47	301-1814	1	Bracket, Panel Stop
33	332-0943	2	Spacer, Relay Socket	48	VOLTMETER, AC - Pennsylvania Approved Sets		
34	332-1043	1	Jumpers, Selector Switch - Sets Without Time Delay Preheat Relay	320-0421	1		Single Phase Sets (Scale Reads 0-300)
35	HARNESS, WIRING (Begin Spec AA)			320-0400	1		Three Phase Sets (Scale Reads 0-600)
	338-0763	1	Voltage Regulator to Circuit Breaker	49	METER, RUNNING TIME - Begin Spec AA		
	338-0936	1	Voltage Regulator to Running Time Meter	312-0458	1		60 Hertz Sets
36	305-0583	1	Regulator, Voltage - Begin Spec AA (See Separate Group for Components)	302-0465	1		60 Hertz Sets
37	306-0195	1	Plate, Starter Relay Mounting - Key 2	50	302-0513	1	Block, Terminal - 4 Place
	BRACKET, RELAY MOUNTING (Sets With Four Signal Lights)			51	312-0053	3	Condensers (1 Mfd) Spec A through Z
38	301-2393	1	Used for Low Oil Pressure and High Water Temperature Relays or 5 and 10 Second Cycle Cranker Relays	52	308-0012	1	Switch, Voltage Selector - Pennsylvania Approved 3 Phase Sets Begin Spec AA
39	301-3252	1	Used for Generating and Low Engine Temperature Relays	53	303-0076	1	Knob, Voltage Selector Switch - Pennsylvania Approved 3 Phase Sets Begin Spec AA
40	301-2115	1	Box, Control	54	301-2727	1	Handle, Upper Control Panel
41	402-0078	4	Mount, Rubber	55	303-0197	1	Rheostat (2500 Ohm, 25 Watt) - Sets With Voltage Adjustment - Begin Spec AA
42	301-2106	1	Bracket, Mounting - Control Box (Unhoused Sets) - Spec A through Z	56	303-0032	1	Knob, Rheostat - Sets With Voltage Adjustment - Begin Spec AA
				57	301-3682	1	Box, Output - Begin Spec AA
				58	301-0856	1	Cover, Output Box - Begin Spec AA
				59	301-3720	1	Bracket, Output Box (Housed Sets) Begin Spec AA
				60	320-0505	1	Breaker, Circuit - Voltage Regulator - Begin Spec AA
				61	301-3715	1	Saddle, Control Box Mounting (Unhoused Sets) Begin Spec AA
				62	301-3716	1	Plate, Control Mounting (Unhoused Sets) Begin Spec AA
				63	506-0017	2	Washer, Fiber - Resistor Mounting
				64	517-0015	1	Plug, Dot Button

VOLTAGE REGULATOR - BEGIN SPEC AA



ES-1073

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	305-0583	1	Regulator, Voltage (Includes Parts Marked *)
1	301-3719	1	*Panel, Voltage Regulator Mounting
2	300-1540	1	*Board, Voltage Regulator - Begin Spec AB (Replaces 300-1006 Board Used Prior To Serial Number F760142042 During Spec AA and 300-1404 Board Used Beginning Serial Number F760142042 During Spec AA) Refer to Printed Circuit Board Parts Catalog Number 900-0234 for Board Components
3	332-1655	1	*Strip, Terminal
4	315-0386	1	*Transformer, Voltage
5	315-0391	1	*Reactor
6	812-0070	4	*Screw, Machine - Round Head (#6-32 x 1-1/4")
7	812-0061	4	*Screw, Machine - Round Head (#6-32 x 3/8")
8	812-0063	2	*Screw, Machine - Round Head (#6-32 x 1/2")
9	853-0003	4	*Washer, Lock - ET (#6)
10	870-0183	6	*Nut, Hex - ET (#6-32)
11	HARNES, WIRING (Voltage Regulator to Exciter Stator)		
	338-0762	1	Sets Without Overspeed Switch
	338-0768	1	Sets With Overspeed Switch

* - Parts Included in 305-0583 Voltage Regulator.

SERVICE KITS AND MISCELLANEOUS

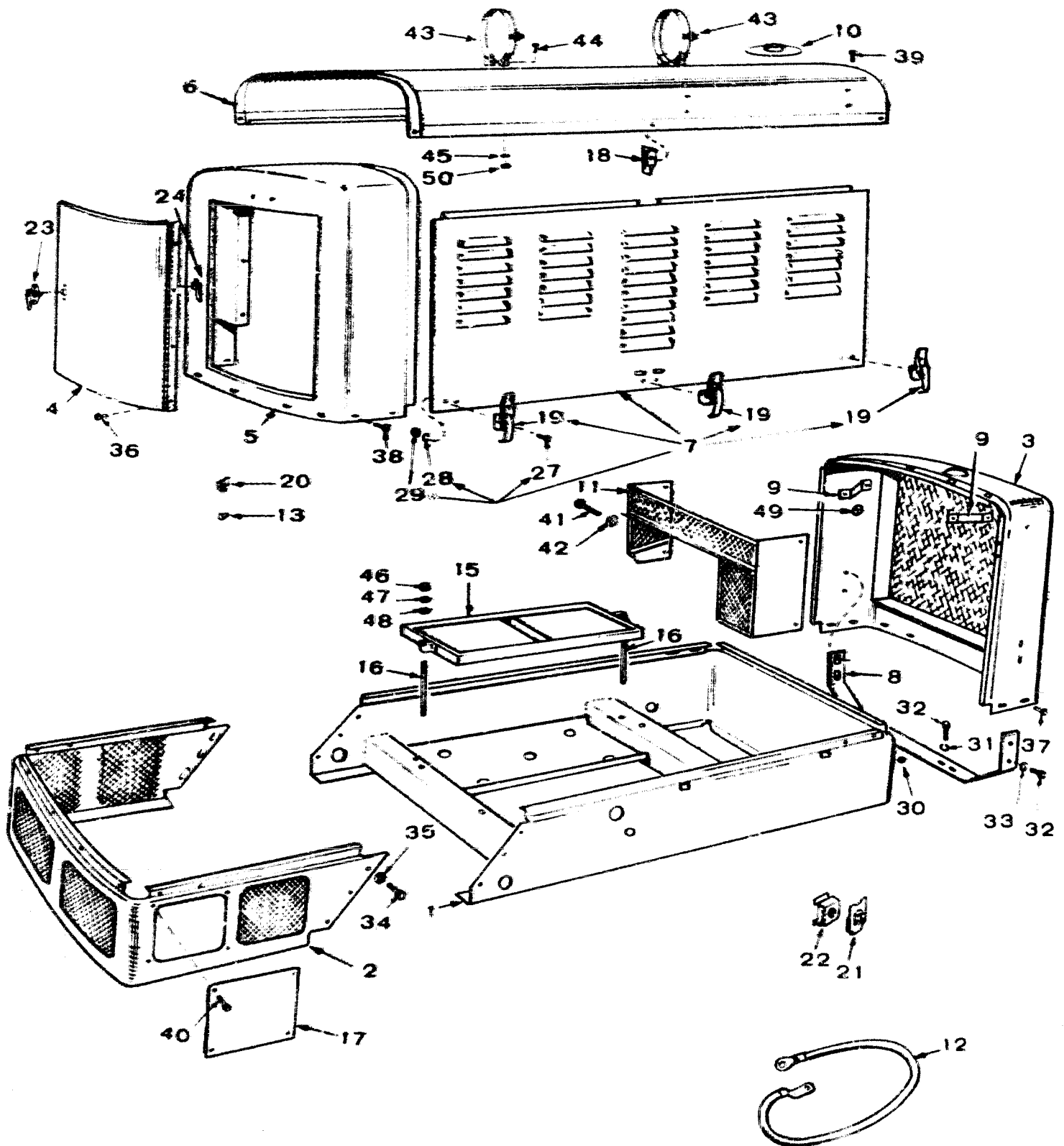
NOTE: For other kits refer to the related group for the part in question.

PART NO.	QTY. USED	PART DESCRIPTION
LABEL KIT		
98-1100	1	General Service
98-2290	1	Diesel
168-0108	1	Gasket Kit, Engine
522-0244	1	Overhaul Kit, Set
TOUCH-UP PAINT (13 oz. Pressurized Can)		
525-0137	1	Metallic Green
525-0305	1	Non-metallic Green
525-0454	1	Greige - Enamel

OPTIONAL PARTS SECTION

This section contains illustrated parts listing of factory installed options. Options may not be applicable to all models; for field conversions additional parts are usually required.

HOUSING AND CHASSIS - OPTIONAL



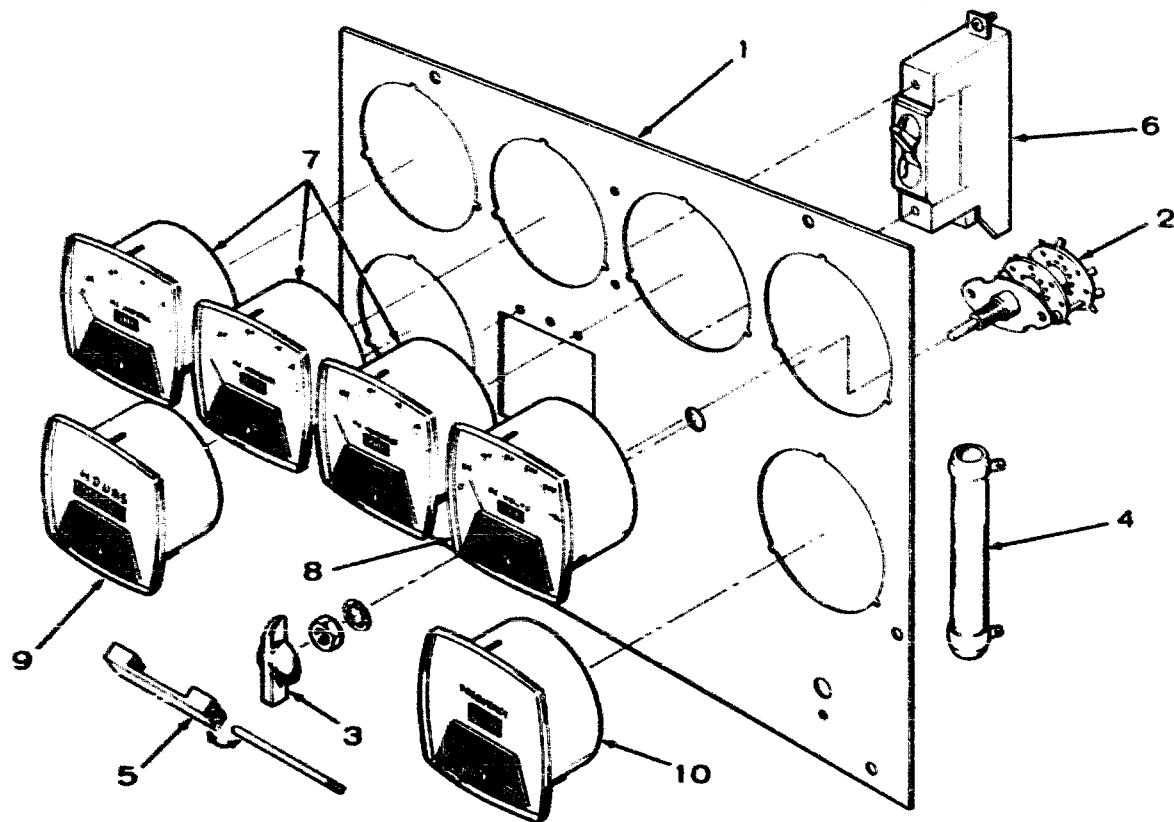
HOUSING AND CHASSIS - OPTIONAL

NOTE: Parts in this group are for both housed and unhoused sets unless otherwise specified. Parts marked with an asterisk (*) are standard for Radiator Cooled Sets (Key 1).

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-0718	1	*Chassis Mounting (Front Section)	30	862-0003	2	*Nut, Hex (3/8-16) Radiator to Chassis (Housed Sets)
2	403-0477	1	Chassis, Rear Section - Housed Sets	31	850-0050	2	*Washer, Lock - Spring (3/8") Radiator Support
3	*PANEL, FRONT END (Radiator Grille)			32	800-0024	4	*Screw, Cap - Hex Head (5/16-18 x 1/2") Radiator Bracket to Radiator
	405-1079	1	Spec A through AB	33	850-0045	4	*Washer, Lock - Spring (5/16") Radiator Bracket to Radiator
	405-2602	1	Begin Spec AC	34	800-0047	6	Screw, Cap - Hex Head (3/8-16 x 5/8") Rear Chassis to Front Chassis (Housed Sets)
4	405-1080	1	Panel, Rear Door (Housed Sets) NOTE: Early model sets using Rear Door Panel Knob also order 406-0157 Door Handle and 406-0089 Door Handle Catch	35	850-0050	6	Washer, Lock - Spring (3/8") Rear Chassis to Front Chassis (Housed Sets)
5	405-1081	1	Panel, Rear End (Housed Sets)	36	809-0059	4	Screw, Pan Head (1/4" x 1/2") Rear Door Panel to Rear End Panel (Housed Sets)
6	405-1319	1	Panel, Top (Housed Sets)	37	821-0014	8	*Screw, Locking Head (5/16-18 x 1/2") Front Panel to Chassis
7	405-1084	2	Panel Assembly, Side (Includes Parts Marked #) (Housed Sets)	38	821-0014	8	Screw, Locking Head (5/16-18 x 1/2") Rear Panel to Chassis (Housed Sets)
8	130-0396	1	*Support, Radiator Mounting	39	821-0014	12	Screw, Locking Head (5/16-18 x 1/2") Top Panel Mounting (Housed Sets)
9	*BRACKET, RADIATOR			40	800-0024	4	Screw, Cap - Hex Head (5/16-18 x 1/2") Chassis Panel (Housed Sets)
	130-0397	2	Spec A through AB	41	800-0048	4	*Screw, Cap - Hex Head (3/8-16 x 3/4") Fan Guard to Radiator
	130-1681	2	Begin Spec AC (Includes Washers)	42	850-0050	4	*Washer, Lock - Spring (3/8") Fan Guard to Radiator
10	405-1889	1	Shield, Rain (Housed Sets) Used With 155-0360 Critical Muffler	43	140-0078	2	Band, Muffler Mounting (Housed Sets) Used With 155-0360 Critical Muffler
11	*GUARD, FAN			44	800-0025	4	Screw, Cap - Hex Head (5/16-18 x 5/8") (Housed Sets) Used With 155-0360 Critical Muffler
	130-0623	1	Spec A through AB	45	850-0045	4	Washer, Lock - Spring (5/16") (Housed Sets) Used With 155-0360 Critical Muffler
	130-1684	1	Begin Spec AC	46	862-0015	4	*Nut, Hex (5/16-18) Battery Holddown
12	336-0476	1	*Lead, Ground (12-1/4")	47	526-0024	2	*Washer, Flat (21/64" ID x 3/4" OD x 1/16" Thk) Battery Holddown
13	406-0002	1	Knob, Rear Door Panel - Used on Early Models (Housed Sets)	48	850-0045	4	*Washer, Lock - Spring (5/16") Battery Holddown
15	416-0495	1	*Frame, Battery Holddown	49	526-0013	16	*Washer, Flat (25/64" ID x 1" OD x 1/16" Thk) Radiator Bracket
16	520-0669	2	*Stud, Battery Holddown Frame	50	862-0015	4	Nut, Hex (5/16-18) (Housed Sets) Used With 155-0360 Critical Muffler
17	403-0373	1	Panel, Chassis (Housed Sets)				
18	405-1181	2	Stop, Door - Side Panel Assembly (Housed Sets)				
19	406-0105	6	#Fastener, Side Panel (Housed Sets)				
20	406-0088	1	Catch, Rear Door Panel - Used on Early Models (Housed Sets)				
21	870-0106	4	Nut, Speed - Rear Door Panel Mounting (Housed Sets)				
22	870-0113	12	Nut, Speed Grip - Top Panel Mounting (Housed Sets)				
23	406-0157	1	Handle, Door - Includes Mounting Hardware and Keys (Housed Sets)				
24	406-0089	1	Catch, Door Handle (Housed Sets)				
27	813-0098	12	#Screw, Machine - Round Head (#10-32 x 3/8") Fastener Mounting (Housed Sets)				
28	850-0030	12	#Washer, Lock - Spring (#10) Fastener Mounting (Housed Sets)				
29	*NUT (#10-32) (Housed Sets)						
	870-0053	8	Hex - End Fastener Mounting				
	870-0298	4	Self Locking - Middle Fastener Mounting				

- Included in 405-1084 Side Panel Assembly.

AC METER PANEL - OPTIONAL

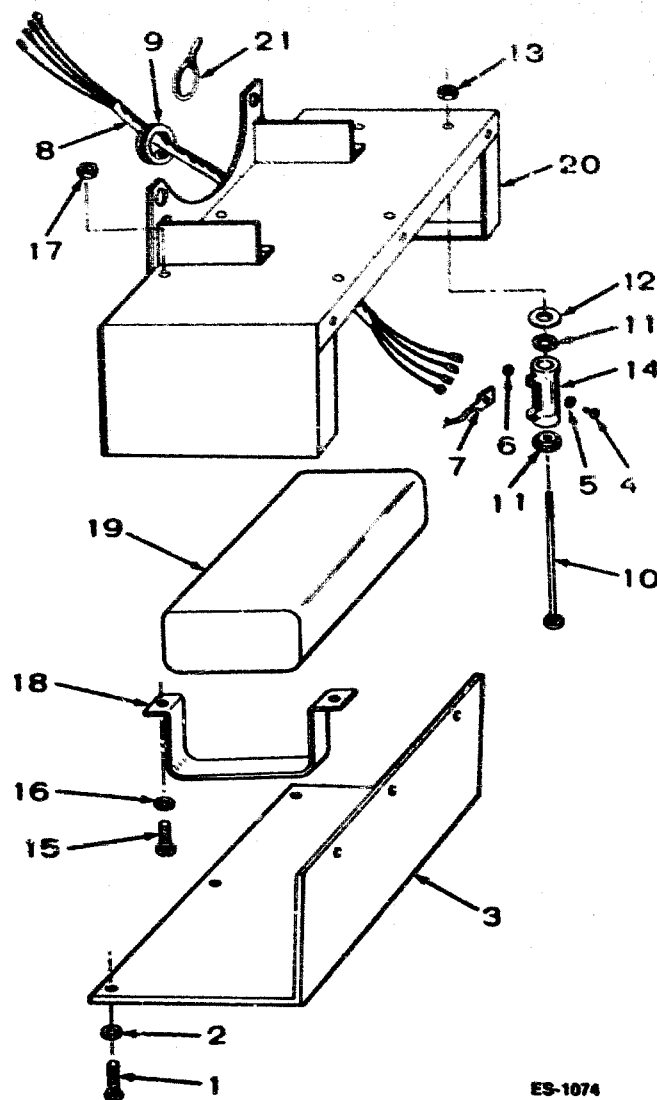


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AC METER PANEL - OPTIONAL

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PANEL, METER			6	BREAKER, CIRCUIT (Select According to Existing Breaker)		
			120/208 Volts				Single Pole
			Spec A through Z				
	301-2138	1	Sets Without Frequency Meter	320-0021	As Req.		60 Amp, 120 Volt
	301-2204	1	Sets With Frequency Meter	320-0366	As Req.		65 Amp, 120/240 Volt
	301-2204	1	Begin Spec AA	320-0367	As Req.		75 Amp, 120/240 Volt
			120/240 Volts	320-0017	As Req.		10 Amp, 240 Volt
			Spec A through Z	320-0198	As Req.		45 Amp, 240 Volt
			Single Phase Sets	320-0052	As Req.		50 Amp, 240 Volt
	301-1551	1	Sets Without Frequency Meter	320-0195	As Req.		55 Amp, 240 Volt
	301-2288	1	Sets With Frequency Meter	320-0118	As Req.		70 Amp, 240 Volt
			Three Phase Sets	320-0151	As Req.		25 Amp, 480 Volt
	301-2138	1	Sets Without Frequency Meter	320-0152	As Req.		30 Amp, 480 Volt
	301-2204	1	Sets With Frequency Meter	320-0197	As Req.		35 Amp, 480 Volt
			Begin Spec AA				Three Pole Companion
	301-2288	1	Single Phase Sets	320-0409	As Req.		55 Amp, 240 Volt
	301-2204	1	Three Phase Sets	320-0487	As Req.		25 Amp, 480 Volt
			127/220 Volts	320-0488	As Req.		30 Amp, 480 Volt
	301-2204	1	Begin Spec AA	320-0489	As Req.		35 Amp, 480 Volt
			220/380 Volts	320-0228	As Req.		20 Amp, 600 Volt
			Spec A through Z	320-0551	As Req.		25 Amp, 600 Volt
	301-2330	1	Sets Without Frequency Meter	7	AMMETER, AC (Select According to Scale)		
	301-2308	1	Sets With Frequency Meter	302-0418	As Req.		Scale Reads 0-30
	301-2308	1	Begin Spec AA	302-0444	As Req.		Scale Reads 0-35
			240/416 Volts	302-0419	As Req.		Scale Reads 0-50
			Spec A through Z	302-0458	As Req.		Scale Reads 0-80
	301-2330	1	Sets Without Frequency Meter	302-0408	As Req.		Scale Reads 0-100
	301-2308	1	Sets With Frequency Meter	302-0410	As Req.		Scale Reads 0-150
	301-2308	1	Begin Spec AA	302-0411	As Req.		Scale Reads 0-200
			227/480 Volts	8	VOLTMETER, AC (Select According to Scale)		
			Spec A through Z	302-0420	1		Scale Reads 0-150
	301-2330	1	Sets Without Frequency Meter	302-0421	1		Scale Reads 0-300
	301-2308	1	Sets With Frequency Meter	302-0612	1		Scale Reads 0-500
	301-2308	1	Begin Spec AA	302-0422	1		Scale Reads 0-600
			347/600 Volts	302-0423	1		Scale Reads 0-750
			Spec A through Z	9	METER, RUNNING TIME (Check Existing Meter for Part Number)		
	301-2330	1	Sets Without Frequency Meter				50 Hertz
	301-2308	1	Sets With Frequency Meter	302-0468	1		120 Volt
	301-2308	1	Begin Spec AA	302-0469	1		240 Volt
			347/600 Volts				60 Hertz
			Spec A through Z	302-0465	1		120 Volt
	301-2372	1	Sets Without Frequency Meter	302-0466	1		240 Volt
	301-2397	1	Sets With Frequency Meter	302-0467	1		480 Volt
	301-3736	1	Begin Spec AA	10	METER, FREQUENCY (Select According to Hertz and Volts)		
			Broad Range Sets				50 Hertz
	301-3732	1	Begin Spec AA	302-0234	1		100-150 Volt
2	308-0012	1	Switch, Voltage Selector - Three Phase Sets	302-0256	1		200-250 Volt
3	303-0076	1	Knob, Voltage Selector Switch - Three Phase Sets	302-0825	1		480 Volt
4	304-0536	1	Resistor, Fixed (9,000 Ohm, 50 Watt) Running Time Meter - 600 Volt Sets	302-0788	1		600 Volt
							60 Hertz
5	BAR, CIRCUIT BREAKER TIE			302-0213	1		100-150 Volt
	320-0187	1	Sets With 3 Circuit Breakers	302-0221	1		200-250 Volt
	320-0202	1	Sets With 2 Circuit Breakers	302-0716	1		480 Volt
				302-0717	1		600 Volt

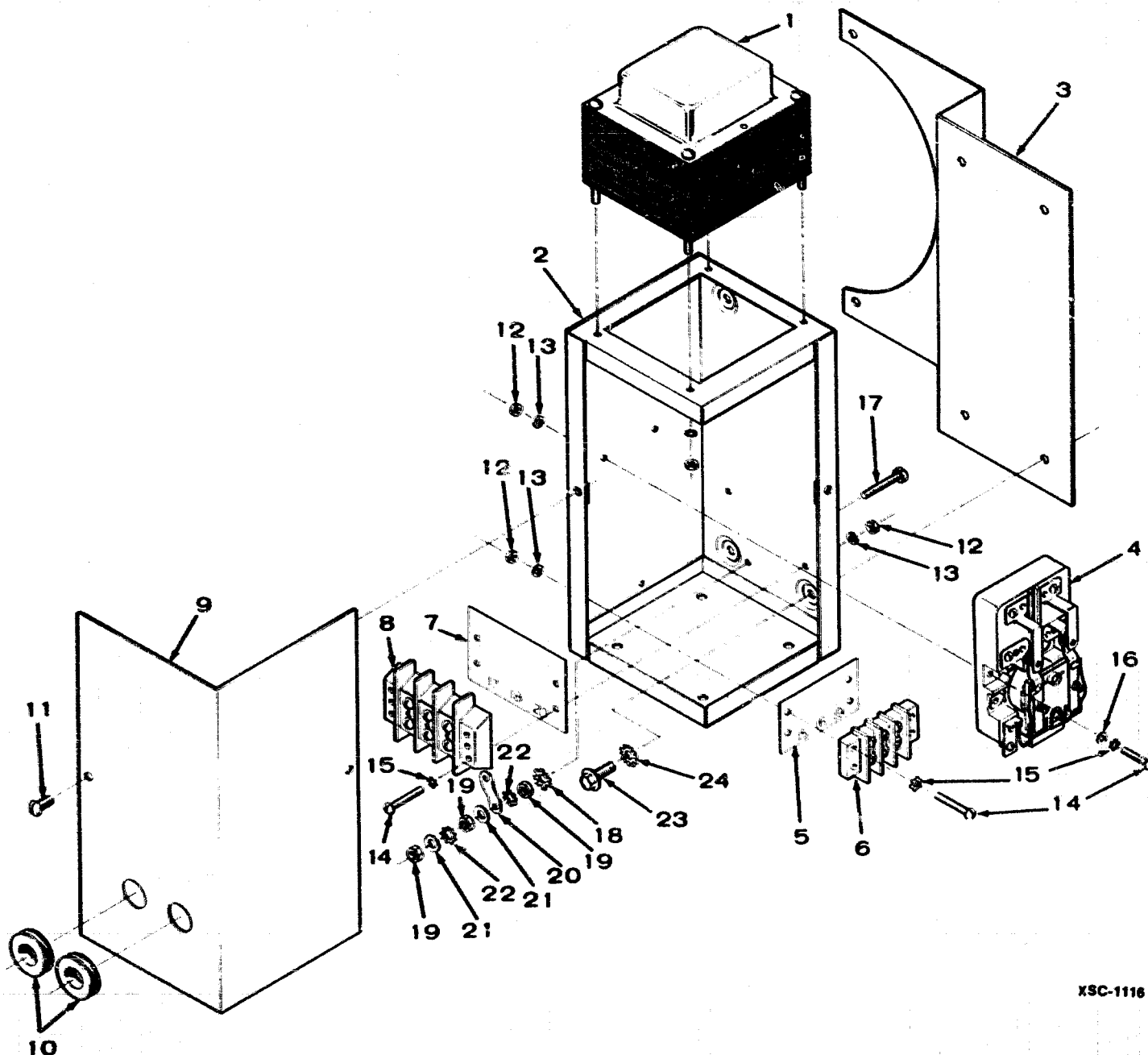
VOLTAGE REGULATOR FILTER (BEGIN SPEC AA) - OPTIONAL



ES-1074

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	813-0098	6	Screw, Machine - Round Head (#10-32 x 3/8")
2	850-0030	6	Washer, Lock - Spring (#10)
3	232-2453	1	Cover, Housing
4	815-0001	4	Screw, Machine - Binding Head Brass (#6-32 x 1/4")
5	853-0003	4	Washer, Lock - ET (#6)
6	860-0006	4	Nut, Hex (#6-32)
7	332-1279	4	Terminal, Lug
8	338-1165	1	Harness, Wiring
9	508-0071	1	Grommet, Rubber
10	813-0112	2	Screw, Machine - Round Head (#10-32 x 2-1/2")
11	304-0015	4	Washer, Centering
12	304-0292	2	Insulator, Resistor
13	870-0053	2	Nut, Hex (#10-32)
14	304-0120	2	Resistor, Fixed (2 Ohm, 25 Watt)
15	812-0079	4	Screw, Machine - Round Head (#8-32 x 1/2")
16	850-0025	4	Washer, Lock - Spring (#8)
17	860-0008	4	Nut, Hex (#8-32)
18	312-0198	2	Bracket, Mounting - Capacitor
19	312-0197	1	Capacitor
20	232-2462	1	Housing, Filter
21	332-0942	2	Tie, Cable
	625-1310	—	Diagram, Wiring

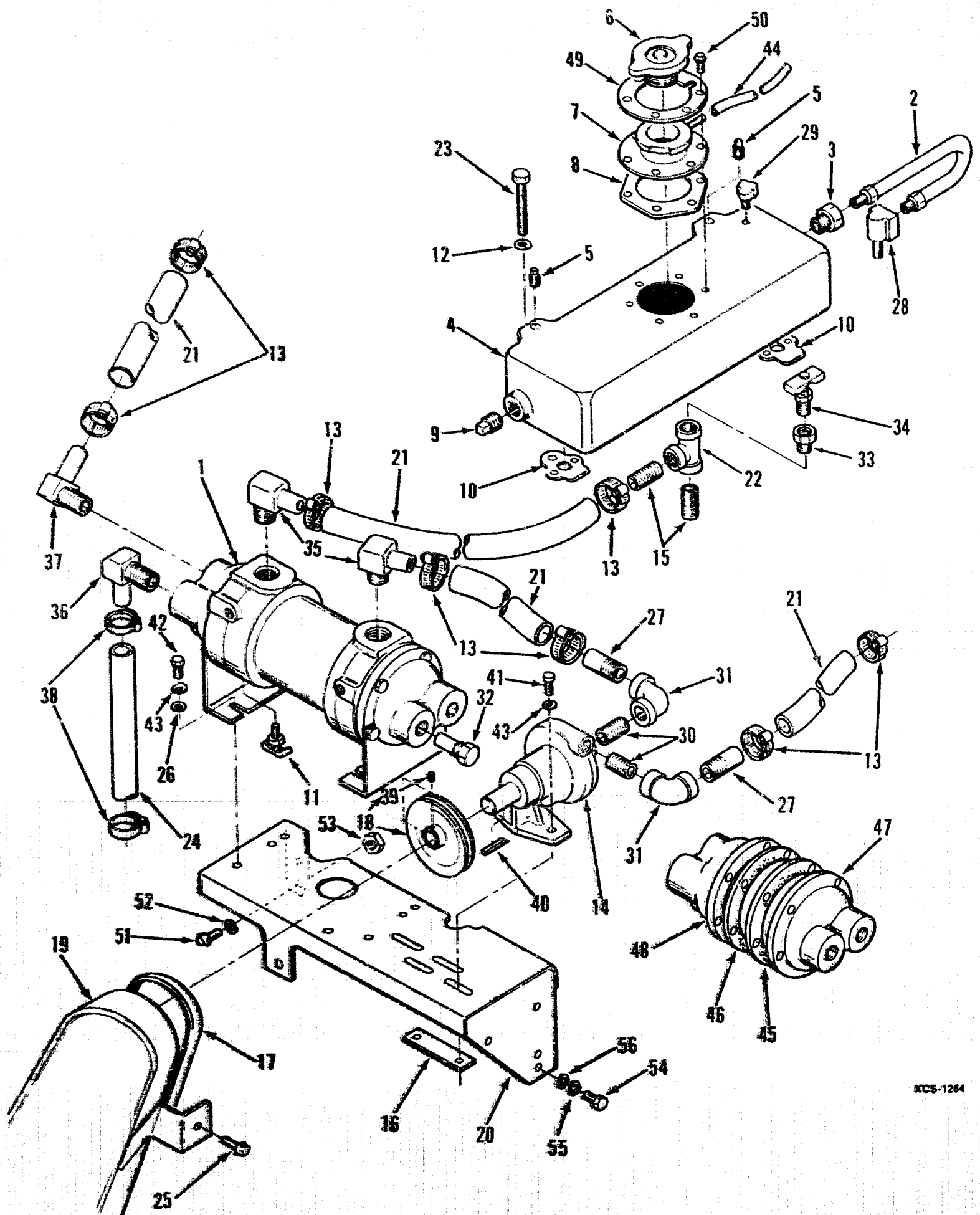
CONTINUOUS GLOW PLUG CONTROL (BEGIN SPEC AB) - OPTIONAL



XSC-1116

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	315-0433	1	Transformer (Includes Mounting Hardware)	14	812-0082	6	Screw, Machine - Round Head Steel (#8-32 x 3/4")
2	301-4428	1	Box, Control	15	853-0005	6	Washer, Lock - ET (#8)
3	301-4821	1	Bracket, Mounting	16	526-0048	2	Washer, Flat - Brass (.172 ID x 3/8" OD x 1/32" Thk)
4	307-1274	1	Relay	17	815-0203	1	Screw, Machine - Round Head Brass With ET (#10-32 x 7/8")
5	332-2566	1	Strip, Marker (Marked 19, 16, 15)	18	856-0003	1	Washer, Lock - EIT (#10)
6	332-0406	1	Block, Terminal (2-21/32" lg)	19	871-0010	3	Nut, Hex - Brass (#10-32)
7	332-2567	1	Strip, Marker (Marked 17, 18, 20)	20	332-0592	3	Jumper, Ground
8	332-0236	1	Block, Terminal (3-3/16" lg)	21	526-0049	2	Washer, Flat - Brass (.200 ID x 7/16" OD x 1/32" Thk)
9	301-4429	1	Cover, Control Box	22	853-0008	2	Washer, Lock - ET (#10)
10	508-0001	2	Grommet	23	821-0014	4	Screw, Cap - Hex Locking Washer Head (5/16-18 x 1/2")
11	815-0026	2	Screw, Machine - Truss Head (#10-32 x 3/8")	24	856-0008	4	Washer, Lock - EIT (5/16")
12	850-0008	6	Nut, Hex (#8-32)		625-1581	—	Diagram, Wiring
13	850-0025	6	Washer, Lock - Spring (#8)				

HEAT EXCHANGER (KEY 2) - OPTIONAL

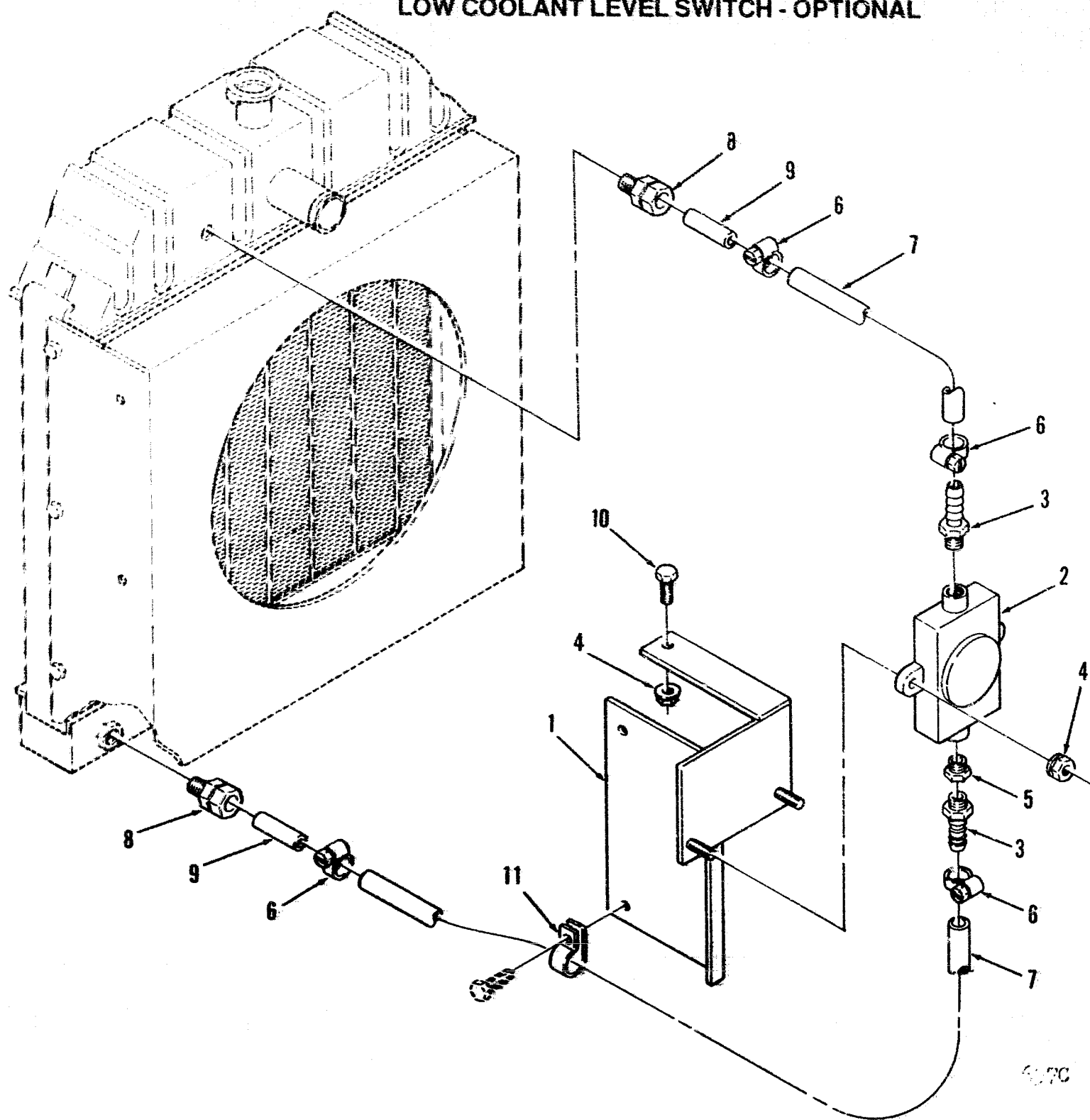


HEAT EXCHANGER (KEY 2) - OPTIONAL

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-0624	1	Exchanger, Heat	29	502-0037	1	Elbow, Inverted Male (Brass)
2	130-0575	1	Line, Water - Expansion Tank to Exhaust Manifold	30	502-0085	2	Nipple, Close - Brass (3/8")
3	502-0103	1	Connector, Inverted Male - Expansion Tank Outlet	31	502-0263	2	Elbow, Brass (3/8" - 90°)
4	130-0646	1	Tank, Expansion	32	130-1340	2	Pencil, Zinc (Included in Heat Exchanger)
5	502-0080	2	Plug, Expansion Tank Fill Vent	33	502-0049	1	Bushing (3/8 x 1/8"), Reducer (Brass)
6	130-0589	1	Cap, Pressure	34	504-0006	1	Valve - Air Bleed Manifold Outlet
7	130-0590	1	Neck and Adapter, Expansion Tank Cap	35	502-0300	2	Elbow, Brass - Heat Exchanger Fresh Water Hoses
8	130-0519	1	Gasket, Neck and Adapter	36	502-0302	1	Elbow, Brass - Heat Exchanger Raw Water Inlet Hose
9	502-0155	1	Plug (3/8")	37	502-0237	1	Elbow, Brass - Heat Exchanger Raw Water Outlet Hose
10	309-0145	2	Gasket, Thermostat Chamber	38	503-0446	2	Clamp, Hose
11	504-0003	1	Valve, Drain	39	SCREW, SET 803-0062	1	Water Pump with Flat Area on Shaft
12	526-0065	4	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk) Tank Mounting		803-0062	2	*Water Pump with Keyed Area on Shaft
13	503-0183	8	Clamp, Hose	40	515-0249	1	*Key - Pulley to Water Pump
14	PUMP, WATER (See Separate Group for Components)				SCREW, CAP - HEX HEAD		
	132-0262	1	Pumps With Flat Area on Shaft (Replacement Kit - Includes 132-0110 Water Pump and Parts Marked *)	41	800-0005	2	Water Pump Mounting (1/4-20 x 3/4")
	132-0110	1	Pumps With Keyed Area on Shaft	42	800-0004	4	Heat Exchanger Mounting (1/4-20 x 5/8")
15	505-0101	2	Nipple, Pipe - Close (3/8")	43	WASHER, LOCK - SPRING (1/4")		
16	131-0130	1	Bar, Pump Holddown		850-0040	2	Water Pump Mounting
17	511-0067	1	Belt, Centrifugal Water Pump		850-0040	4	Heat Exchanger Mounting
18	PULLEY KIT, WATER PUMP (Includes Set Screws)			44	503-1261	1	Hose, Overflow (13")
	512-0134	1	Water Pumps With Flat Area on Shaft	45	130-0729	1	Gasket - Heat Exchanger Fresh Water End
	132-0252	1	*Water Pumps With Keyed Area on Shaft	46	130-0730	1	Gasket - Heat Exchanger Raw Water End
19	GUARD, BELT			47	130-0731	1	Bonnet (Includes Gasket) Heat Exchanger Fresh Water End
	130-0920	1	Spec A Through AB	48	130-0732	1	Bonnet (Includes Gasket) Heat Exchanger Raw Water End
	130-0591	1	Begin Spec AC	49	130-0892	1	Stiffener, Filler Neck
20	BRACKET, HEAT EXCHANGER AND GOVERNOR SPRING			50	821-0005	6	Screw, Locking Head Flange (10-32 x 1/2")
	130-0692	1	Spec A Through AC	51	821-0018	1	Screw, Locking Head - Flange (1/4-20 x 5/8")
	130-2167	1	Begin Spec AD	52	850-0040	1	Washer, Lock - Spring (1/4")
21	503-1196	1	Hose (3/4" ID x 54") Rubber - Total Length Required for All Hoses Except Raw Water Pump	53	862-0001	1	Nut, Hex (1/4-20)
22	505-0060	1	Tee, Pipe (3/8")	54	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")
23	800-0041	4	Screw, Cap - Hex Head (5/16-18 x 4") Tank Mounting	55	850-0045	2	Washer, Lock - Spring (5/16")
24	503-0890	1	Hose (1/2" ID x 14") Rubber - Raw Water Pump to Heat Exchanger	56	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
25	821-0010	3	Screw, Locking Head - Flange (1/4-20 x 1/2")				
26	526-0158	4	Washer, Flat (1/4")				
27	502-0258	2	Nipple Half - Brass (3/8" x 2")				
28	502-0074	1	Elbow, Inverted Male - Manifold Water Line Inlet (Brass)				

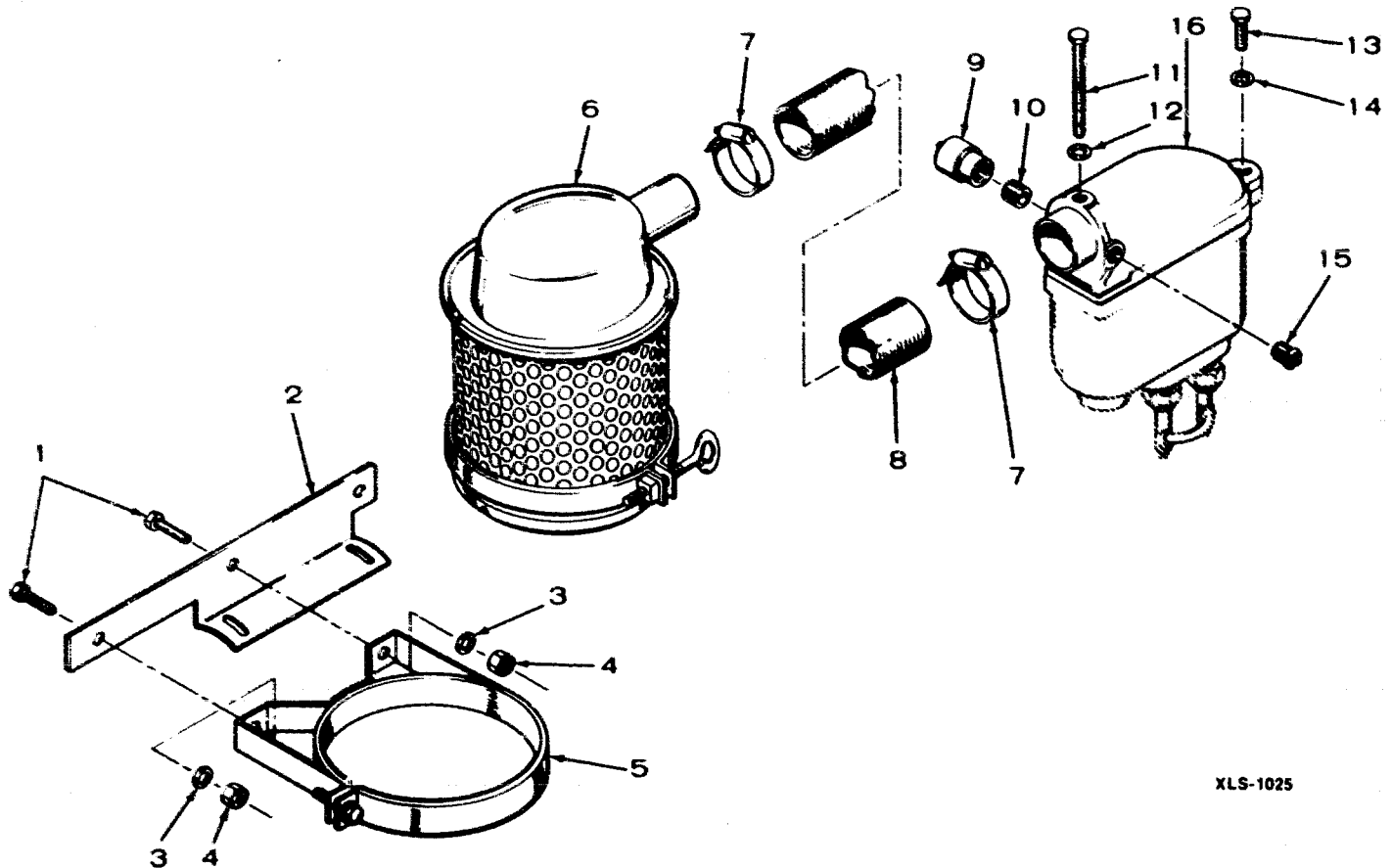
* - Parts Included in 132-0262 Water Pump Replacement Kit

LOW COOLANT LEVEL SWITCH - OPTIONAL



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	405-3015	1	Plate, Mounting
2	193-0292	1	Switch (Includes Two-Tube to Radiator Adapters)
3	502-0389	2	Connector, Hose
4	870-0212	3	Nut, Hex - Self-Locking (1/4-20)
5	505-0151	1	Bushing, Reducer
6	503-0685	4	Clamp, Hose
7	503-0757	2	Hose, Vinyl
8	582-0889	2	Adapter - Tube to Radiator
9	130-2053	2	Tube
10	821-0015	1	Screw, Self Locking - Hex Washer Head (1/4-20 x 3/4")
11	332-0052	1	Clip, Retainer

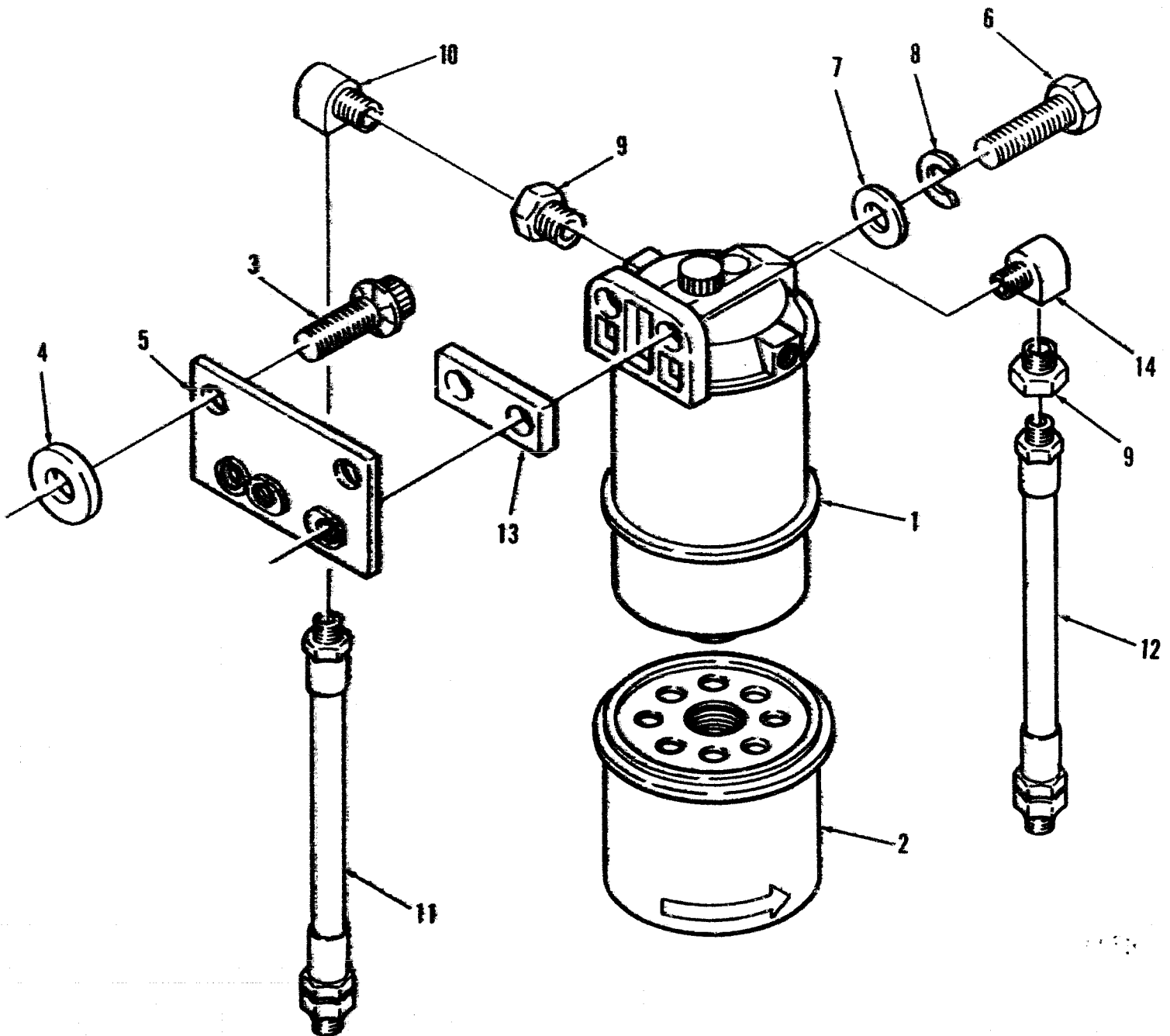
OIL BATH AIR CLEANER - OPTIONAL



XLS-1025

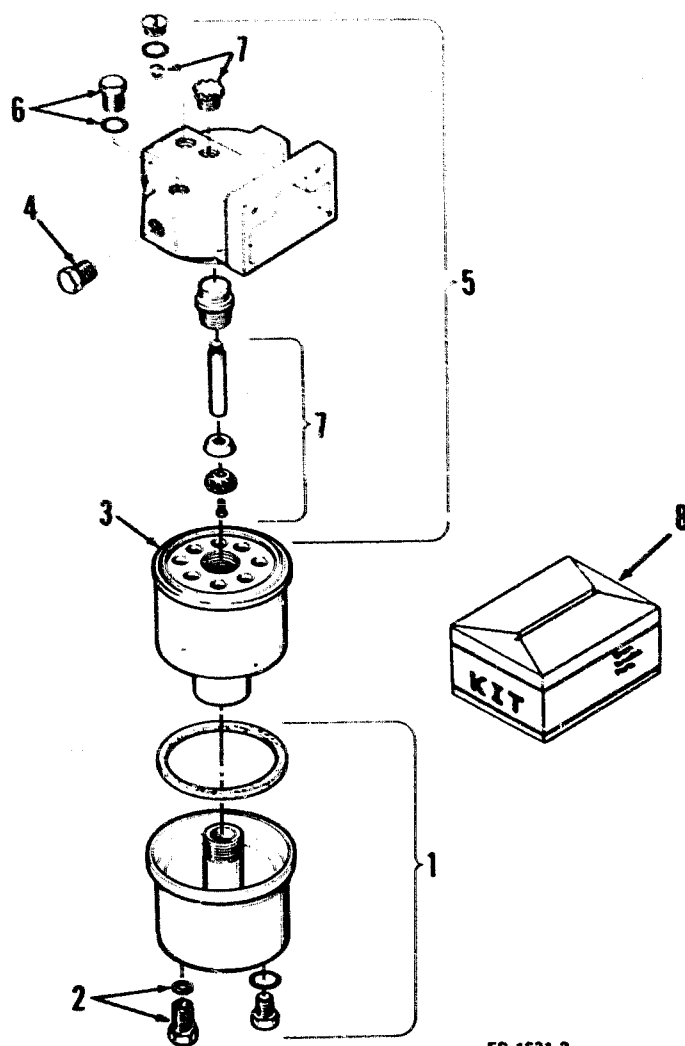
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1 4-20 x 1 2")
2	140-0880	1	Bracket, Cleaner Mounting - Housed Sets
3	850-0040	2	Washer, Lock - Spring (1 4")
4	862-0001	2	Nut, Hex (1 4-20)
5	140-0519	1	Band, Air Cleaner Mounting
6	140-0500	1	Cleaner, Oil Bath Air
7	503-0274	2	Clamp, Hose
8	503-0444	1	Hose, Rubber (30")
9	140-0961	1	Indicator, Restriction - Late Models
10	140-1260	1	Fitting, Restriction Indicator - Late Models
11	800-0015	1	Screw, Cap - Hex Head (1 4-20 x 3")
12	526-0108	1	Washer, Flat (17/64" ID x 7/16" OD x 1/32" Thk)
13	800-0007	1	Screw, Cap - Hex Head (1 4-20 x 1")
14	850-0040	1	Washer, Lock - Spring (1/4")
15	505-0008	1	Plug, Pipe (1 4" Slotted) - Sets With Restriction Indicator
16	ADAPTER, AIR CLEANER HOSE		
	140-0645	1	Sets Without Restriction Indicator
	140-1212	1	Sets With Restriction Indicator

WATER SEPARATOR - OPTIONAL



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-1908-01	1	Separator, Water (Includes Filter Element) (See Separate Group for Components)
2	149-1914-01	1	Element
3	821-0014	2	Screw, Flange Hex Washer Head (5/16-18 x 1/2")
4	526-0122	2	Spacer (11/32" ID x 23/32" OD x 1/8" Thk)
5	149-1623	1	Bracket, Mounting
6	800-0008	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4")
7	526-0015	2	Washer, Flat (1/4")
8	850-0040	2	Washer, Lock - Spring (1/4")
9	502-0029	2	Bushing, Reducer (1/4" to 1/8")
10	502-0020	1	Elbow, Street - 90° (1/8")
11	501-0004	1	Line, Fuel - Flexible (12") Outlet
12	501-0007	1	Line, Fuel - Flexible (24") Inlet
13	149-1922	1	Spacer, Mounting
14	502-0054	1	Elbow, Street - 90° (1/4")

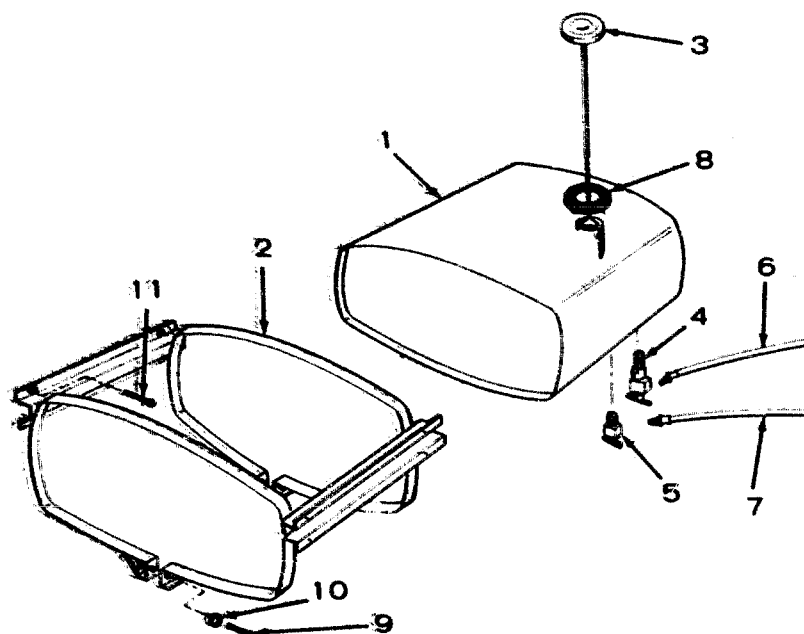
WATER SEPARATOR COMPONENTS



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	149-1908-01	1	Separator, Water (Complete)
1	149-2046	1	Bowl Kit, Metal - Replacement (Includes Plug, O-Rings and Drain Assembly)
2	149-1953	1	Drain Assembly (Includes Knob and Seal)
3	149-1914-01	1	Element (Includes Seals)
4	502-0153	1	Plug, Hex (1/4")
5	149-1949	1	Head Assembly - Replacement (Includes Vent Plug, O-Rings, Seal, Cap, Tube and Pump Assembly)
6	149-1952	1	Plug, Vent (includes O-Ring)
7	149-2047	1	Pump Assembly (Includes Plunger, Retainer, Shaft, Check Ball, Knob and Screw)
8	149-2045	1	O-Ring Kit (Includes Seal and Plunger)

FUEL TANK (HOUSED SETS) - OPTIONAL

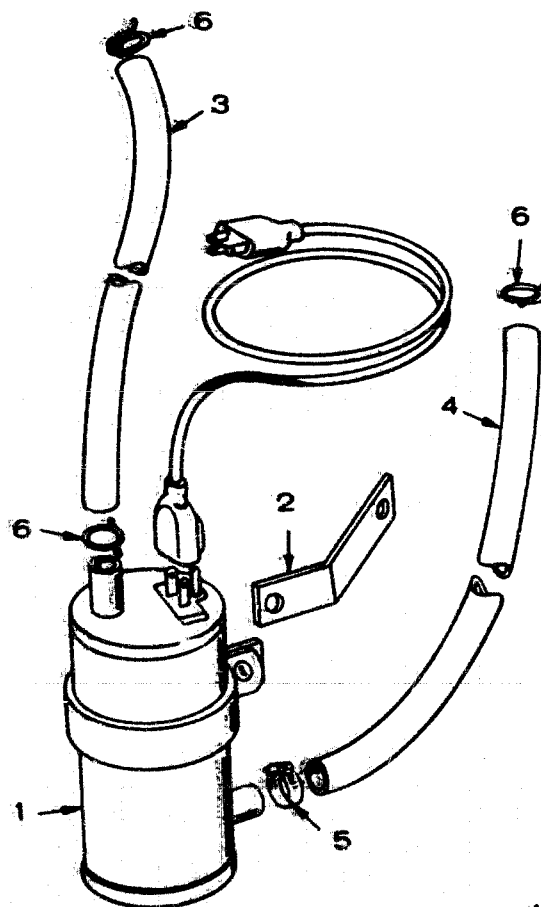
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	159-0639	1	Tank, Fuel (15 Gallons)
2	159-0640	1	Band, Fuel Tank: Holddown
3	159-0642	1	Cap and Indicator Assembly
4	504-0013	1	Valve and Screen Assembly Fuel Shut-Off - Tank Outlet
5	504-0007	1	Valve, Fuel Shut-Off - Tank Inlet (Return Line)
6	501-0005	1	Line, Flex Fuel (18-12") - Tank to Pump
7	501-0086	1	Line, Flex Fuel (31") - Fuel Return
8	159-0751	1	Gasket, Gas Tank Fill Neck
9	812-0166	2	Screw (1/4-20 x 3-1/2"), Round-Head
10	850-0740	2	Washer (1/4"), Lock
11	821-0010	8	Screw (1/4-20 x 1/2"), Self-Locking



M-1135

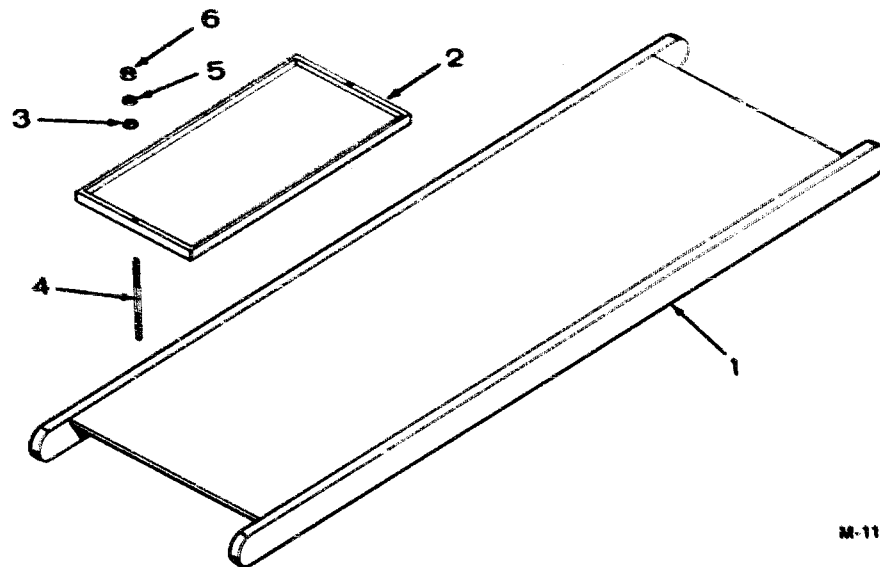
WATER JACKET HEATER - OPTIONAL

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	333-0054	1	Heater, Water Jacket
2	130-3755	1	Bracket, Mounting
3	503-0566	1	Hose, Rubber (5/8" x 18")
4	503-0565	1	Hose, Rubber (5/8" x 20")
5	503-0183	1	Clamp, Hose
6	503-0197	3	Clamp, Hose



M-1136

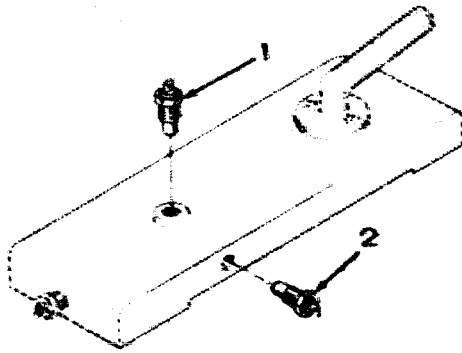
SKID AND BATTERY RACK (KEY 2) - OPTIONAL



M-1134

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-0661	1	Skid
2	416-0502	1	Frame, Battery
3	526-0115	2	Washer, Flat (11/32" ID x 11/16" OD x 1/16" Thk)
4	520-0490	2	Stud, Battery Frame
5	850-0045	2	Washer, Lock - Spring (5/16")
6	862-0015	6	Nut, Hex (5/16-18)

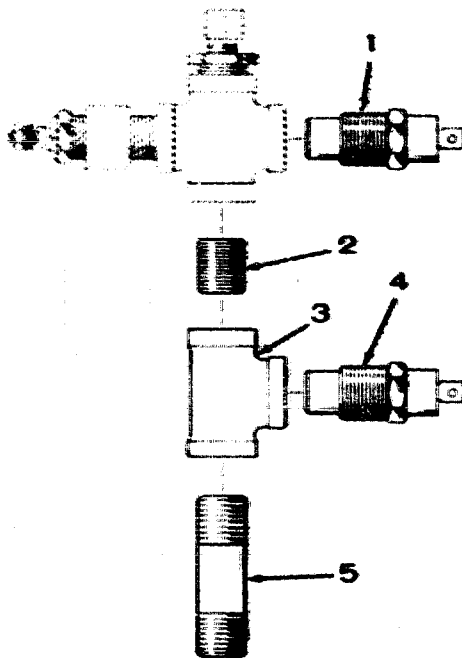
DUAL HIGH WATER TEMPERATURE SWITCH (KEY 1) - OPTIONAL



SC-1117

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0178	1	Switch, High Water Temperature (Opens at 180° - Closes at 205°)
2	309-0179	1	Switch, High Water Temperature (Opens at 190° - Closes at 215°)

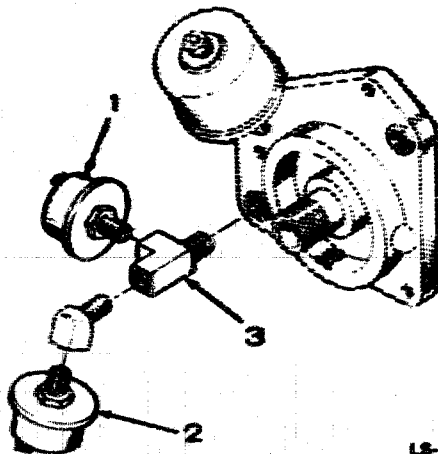
DUAL HIGH WATER TEMPERATURE SWITCH (KEY 2) - OPTIONAL



BB-7133

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0178	1	Switch, High Water Temperature (Opens at 180° - Closes at 205°)
2	505-0101	1	Nipple, Pipe - Close (3/8" x 1-1/8")
3	505-0060	1	Tee, Pipe (3/8")
4	309-0179	1	Switch, High Water Temperature (Opens at 190° - Closes at 215°)
5	505-0075	1	Nipple, Pipe (3/8" x 2-1/2")

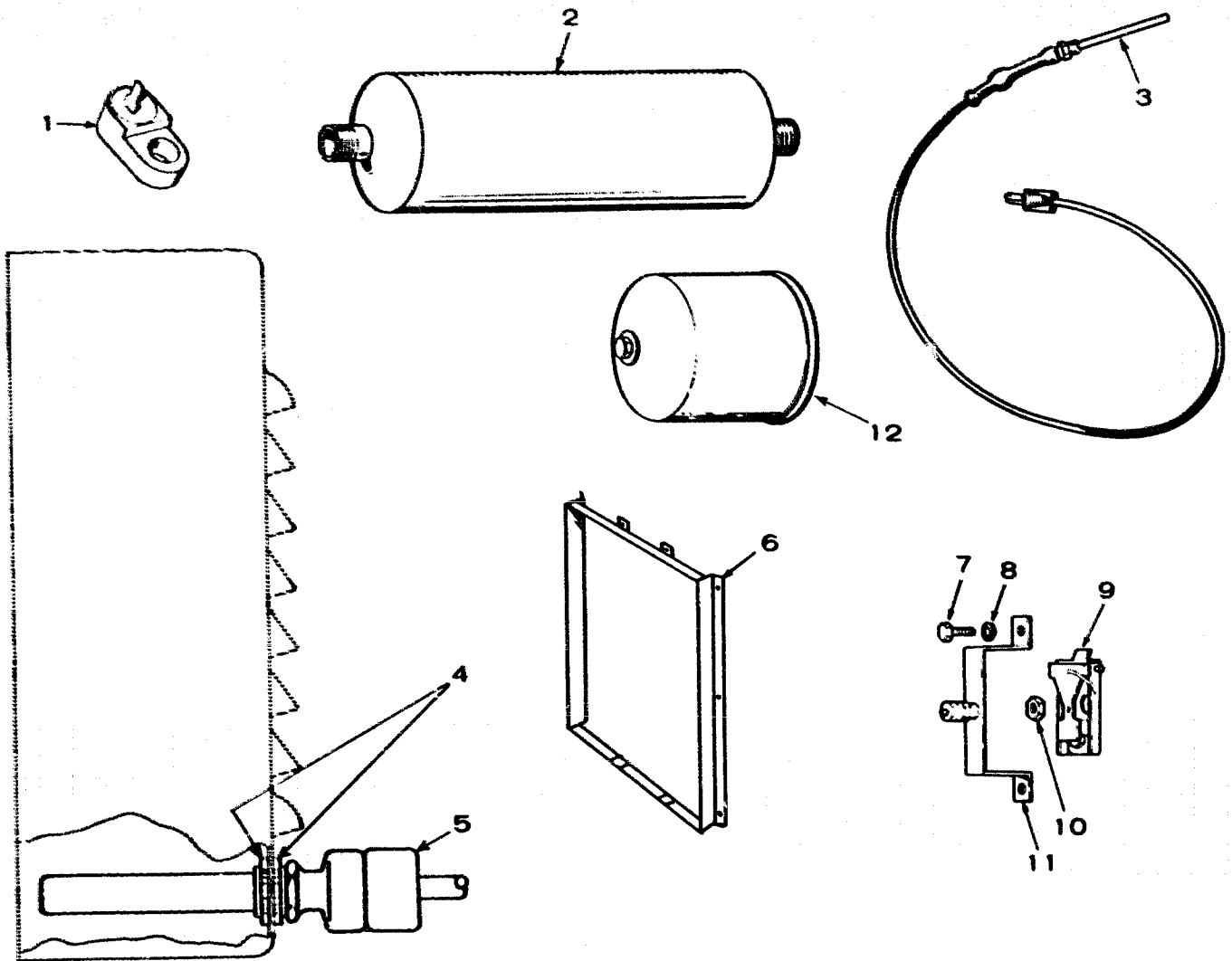
DUAL LOW OIL PRESSURE SWITCH - OPTIONAL



LS-1824

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0064	1	Switch, Low Oil Pressure (Closes at 9 lbs. Descending)
2	309-0169	1	Switch, Low Oil Pressure (Closes at 14 lbs. Descending)
3	502-0058	1	Tee, Street Pipe

MISCELLANEOUS OPTIONAL PARTS



XM-1142

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0269	1	Switch, Low Engine Temperature
2	155-0360	1	Muffler, Critical - Housed Sets
3	102-0558	1	Heater, Oil Base
4	331-0041	2	Nut, Lock (1/2") - Begin Spec AA
5	333-0184	1	Heater, Generator Space - Begin Spec AA
6	405-1157	1	Flange, Air Duct Adapter (Key 1)
7	SCREW 813-0100	2	Machine - Round Head (#10-32 x 1/2") - Spec A through Z
	800-0003	2	Cap - Hex Head (1/4-20 x 1/2") Begin Spec AA

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
8	WASHER, LOCK - SPRING 850-0030	2	#1C - Spec A through Z
	850-0040	2	1/4" - Begin Spec AA
9	SWITCH, OVERSPEED 150-0956	1	60 Hertz Sets
	150-1661	1	50 Hertz Sets
10	868-0004	1	Nut, Jam - Hex Head (7/16-20)
11	BRACKET AND POINT ASSEMBLY 150-0958	1	Spec A through Z
	150-1446	1	Begin Spec AA
12	122-0193	1	Filter, Oil - Heavy Duty (5-3/4" lg)